MYRMECIA

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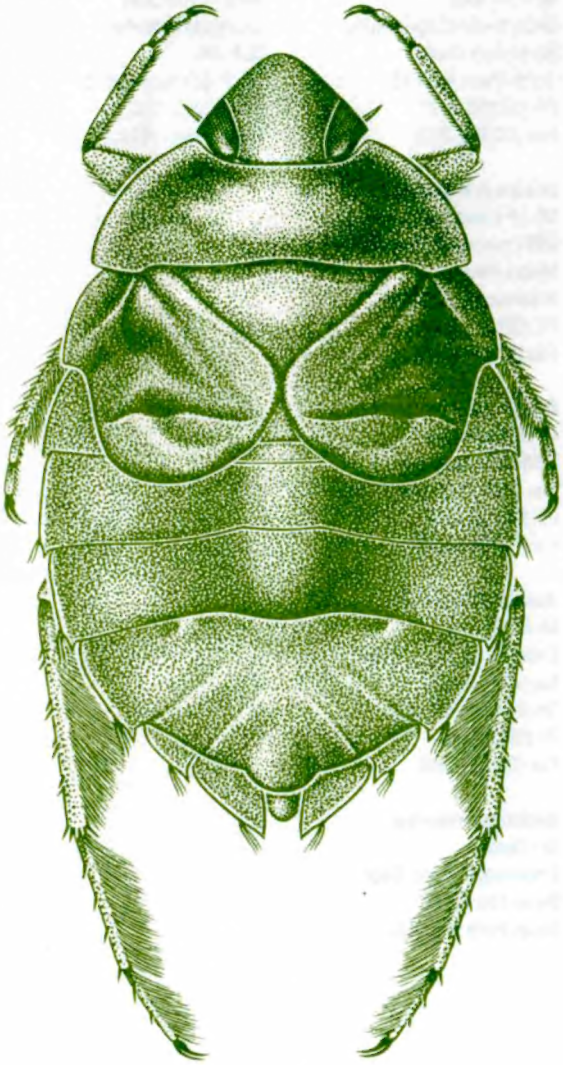

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THE COVER

The cover illustration for this year's ***Myrmecia*** features an illustration from the forthcoming new edition of "Insects of Australia". The illustration is by Dr. S.P. Kim, one of the CSIRO artists who have been working on the numerous new plates for the book. The species shown is *Aphelocheirus australis* Usinger, a member of the family Naucoridae (Hemiptera). This aquatic species occurs rarely in northern Australia. The morph illustrated is brachypterous.

NOTICE

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MYRMECIA

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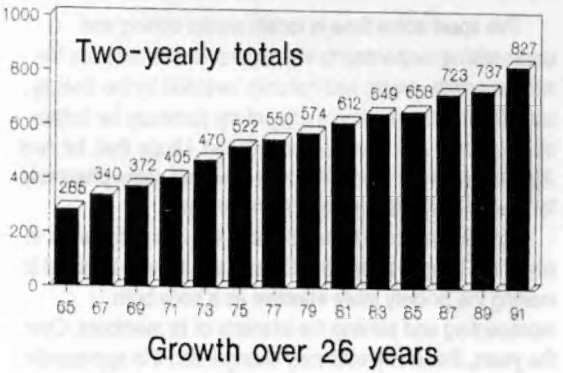
EDITORIAL

This issue contains our bi-annual membership list as as a centre supplement. Please check all details of your entry and communicate any errors to the Secretary, at his address on the inside of the front cover, as soon as possible.

Our Society has shown stronger growth in membership over the last two years than ever before in our 26-year history. The current regional composition of the membership and our growth since foundation are shown graphically below.

Geoff MONTEITH
Myrmecia Editor.



***Myrmecia* Advertising rates**

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Full Page	$60	$180
Half Page	$35	$105
Quarter Page	$24	$72

FROM THE PRESIDENT

I've spent some time in recent weeks sorting and summarising responses to my request for comment on the various prizes, grants and honours awarded by the Society, and will soon be sending a copy of my summary for further discussion, to all those who contributed. I hope that, for next ***Myrmecia***, it will be possible to put forward some proposals for discussion by the general membership.

Consideration of these issues is just one of the ways in which the Executive and the Council are actively involved in making the Society more effective as a body both representing and serving the interests of its members. Over the years, these interests may change, and it is appropriate that our operations should be reviewed from time to time. The Executive at all times welcomes constructive suggestions from the membership regarding possible new areas of activity or changes to current practices.

In this context, it was interesting to see the proposals from Penny Greenslade (Convener, Conservation Committee), for further developments in this area of activity (***Myrmecia*** 26(4): 184-186). As with all such matters, the Executive would be very glad to have your opinions on our present and future role in conservation, either in the light of Penny's proposals or otherwise.

It is important, however, that suggestions for new initiatives be kept within the realm of the possible. There are at least three major constraints on what we can do. The first of these is the Constitution. The second is money. The Society is at present operating on a fairly tight budget, and is likely to be affected particularly by increased costs for the Journal. Any expansion of our activities would probably require an increase in subscriptions. A concomitant of this might be a loss of members, especially younger members, in whose hands, we would like to think, the future of the Society lies. The Society has always sought to keep its membership fees low, to encourage membership by as many interested people as possible. The third and often overlooked factor, is the amount of time available to elected office bearers and others to put new initiatives into effect. The office bearers put an enormous amount of time into their work on the Society's behalf, and they do it willingly, cheerfully and effectively. I doubt, however, that there is scope for any increase in their workload. Scientists in all institutions are finding that the pressures of employment in teaching, research, administration and extension are increasing, leaving less time to be devoted to professional activities outside the demands of their jobs as such. To give a single example of the effect of this, you may recall that there was mention at the 21st AGM of tax deductibility of donations to the AES Research Grants Account. In order to receive donations that are tax deductible, we need to become a "research institute" with an externally approved board. As an initial gambit to determine the level of interest in this, I asked present councillors and former presidents and vice presidents whether they would be prepared to serve on such a board. The response, was generally speaking, "NO!". The matter is still worth further investigation, but the example serves to illustrate the limitations of time that realistically circumscribe our activities.

Dinah Hales
President

Executive Quarterly Report

MEETINGS

The Executive met on November 22, December 18, 1990 and January 17, 1991.

MEMBERSHIP

The Executive accepted 14 nominations for membership, and elected 12 new members. The distribution of members is as follows:

Overseas	64	SA	68	QLD	189
NT	14	ACT	125	WA	51
NSW	169	TAS	31	VIC	109
Address Unknown		7			

Membership by category is:

Full	647	Honorary	4
Student	92	Joint	26
Retired	58	TOTAL	827

The Executive accepted resignations from Dr V.E. Harris, Ms C.M.A. Kennedy, Dr C.L. Bellamy, Dr P.J.M. Greenslade, Mr E. Hamilton-Smith, Mr G.A. Holloway, Mrs P. Kleinschmidt, Mr D.K. Mardon.

Terminations

The following members will now be struck off in accordance with clause 21(c) of the Constitution.

D.M. Beech	L.A. Miller
R. Berena	S. Neser
J.A. Cavanaugh	N. Nikolakopoulos
S.A. Constable	P.G.N. Njagi
J.M. Dearn	A.J.E. Orian
S. Hamlet	L.F. Queale
C. Hawkins	E. Schicha
R.E. Jones	S. Suwanbutr
M. Kotzman	M. Tichon
D.C. Lake	P.F. Van Heurck
B.S. Ligat	W.E. Wright

NEW MEMBERS

We welcome the following new members:

Elected November 22, 1990

Mr J. DeBARRO, BAgricSci(Hons), 10 Showground Parade, Keith, SA 5267. James is a plant protection consultant with Crop Monitoring Services and his interests include insect behaviour and collecting.

Mr D. KITCHIN, BEcon, 21 Alderley Street, Toowoomba, QLD 4350. Denis has a personal interest in the life cycles of butterflies and beetles.

Elected December 18, 1990

Mr P.D. CLAYTON, BSc(Hons), Department of Zoology, James Cook University, Townsville, QLD 4811. Paul is a PhD student who is interested in aquatic entomology, upland rain forest streams and community ecology.

Ms C. GILBERT, BSc, MSc, 15 Grylls Crescent, Cook, ACT 2614. Catherine is a Technical Assistant with varied entomological interests.

Mr P. GREEN, BSc, Department of Primary Industries, Animal Research Institute, 665 Fairfield Road, Yeerongpilly, QLD 4205. Peter is a veterinary parasitologist and is interested in chemical resistance, epidemiology and control of veterinary arthropods.

Dr G.S. HUNT, BSc, DipEd, PhD, Arachnology Department, Australian Museum, College Street, Sydney, NSW 2000. Glenn is a scientist with interests in Opiliones and other arachnid groups.

Miss R. JACKSON, BSc(Zool), 19 Henry Cable Court, Mill Park, VIC 3082. Robyn is a student who is interested in pest ecology and bio-control.

Dr K.L. LINDSAY, BSc, MSc, PhD, 60 Eucumbene Drive, Duffy, ACT 2611. Kay is an Entomologist with the Department of Primary Industries and Energy, Australian Quarantine Inspection Service. She is interested in insect physiology, electron microscopy, acarology and regulatory entomology.

Mr M. MOUAHAL, BSc, 4/52 Bathurst Street, Liverpool, NSW 2170. Mohamed is interested in general entomology and insecticides.

Elected January 17, 1990

Mr C.R. PAVEY, BSc(Hons), Entomology Department, University of Queensland, QLD 4072. Chris is a PhD student who is interested in general entomology.

Mr G.S. RICHMOND, BSc(Hons), MSc, c/- PO Box 547, Nedlands, WA 6009. Guy is a PhD student whose interests include rangeland management, predations of seeds by insects and spider ecology.

Dr D.E. WALTER, BSc, MSc, PhD, Department of Ecology and Evolutionary Biology, Monash University, Clayton, VIC 3168. David is interested in the ecology, behaviour and systematics of free living Acarina; soil invertebrate ecology; arthropod-fungus interactions; nematodes.

Change of address or title

Mr F.B. ANTRAM, Traffic (Oceania), PO Box R594, Royal Exchange, Sydney, NSW 2000.

Dr M.A. BATEMAN, 8/4A Boyle Street, Balgowlah, NSW 2093.

Mr J.D. BROWN, Entomology Branch, PO Box 591, Ayr, QLD 4807.

Mr A.J. CAMPBELL, NSW Agriculture and Fisheries Regional Veterinary Laboratory, Private Mail Bag (UNE), Armidale, NSW 2351.

Ms F.J. CLISSOLD, 16 Thomasina Street, East Bentleigh, VIC 3165.

Mr R. DALLWITZ, CSIRO Division of Water Resources, GPO Box 1666, Canberra, ACT 2601.

Mr G.P. DAVIS, 6 Elwick Place, Lyons, ACT 2606. Dr V.A. Drake, Department of Physics, University College, Australian Defence Force Academy, Northcott Drive, Campbell, ACT 2000.

Mr P.B. Du GUESCLIN, 30 Grant Street, Colac, VIC 3250.

Dr C.H. EISEMANN, CSIRO Division of Tropical Animal Production, Indooroopilly, QLD 4068.

Dr M.A. ELGAR, Department of Zoology, University of Melbourne, Parkville, VIC 3052.

Miss J.A. EWERS, 4 Roma Street, Scoresby, VIC 3179.

Mr T.L. FENNER, Quarantine and Inspection Branch, PO Box 2268, Darwin, NT 0801.

Mr P.N.M. FORTE, Unit 1, 63 Moulden Avenue, Yokine, WA 6060.

Mr T. GLARE, MAF Technology, Canterbury Agriculture and Science Centre, PO Box 24, Lincoln, New Zealand. Becomes Dr and changes from student to full membership.

Mr C. GOLETSOS, School of Biological Science, University of New South Wales, PO Box 1, Kensington, NSW 2033.

Mr A.S. GREEN, 6 Armson Avenue, Magill, SA 5072.

Dr P.J. GULLAN, Division of Botany and Zoology, Australian National University, GPO Box 4, Canberra, ACT 2601.

Mr J. HARDY, 63 Old Road, Wheatley, Oxon, United Kingdom, OX9 1NX.

Mr T.A. HEARD, CSIRO Division of Entomology, PMB 3, Indooroopilly, QLD 4068.

Mr A. HENDERSON, Institute of Plant Sciences, Burnley Gardens, Swan Street, Burnley, VIC 3121.

Mr J.A. HOLT becomes Dr J.A. Holt.

Mr R.H. HOLTKAMP, Agricultural Research Centre, RMB 944, Tamworth, NSW 2340.

Dr T.F. HOUSTON, Western Australian Museum, Francis Street, Perth, WA 6000.

Mr J.T. JENNINGS, Roseworthy Campus, University of Adelaide, Roseworthy, SA 5371.

Mr P.G. KELLY, 16 Roberts Street, East Brunswick, VIC 3057.

Dr J. LANDSBERG, CSIRO Wildlife and Ecology, PO Box 84, Lyneham, ACT 2602.

Dr K.S. LEFEVERE, Department of Ecology and Evolutionary Biology, Monash University, Clayton, VIC 3168.

Ms L.A. LOBRY de BRUYN, Department of Primary Industries, Mt Pleasant Laboratories, PO Box 46, King Meadows, TAS 7249. Changes from student membership to full membership.

Mr G.P. MADDEN, Department of Crop Protection, Waite Agricultural Research Institute, PMB 1, Glen Osmond, SA 5064.

Assoc. Prof. J.D. MAJER (formerly Dr J.D. Majer).

Dr D.B. McCORQUODALE, Biology, University College of Mt Breton, Box 5300, Sydney, Nova Scotia, B1P 6L2, Canada.

Mr P.S. MCFADDEN, Sudden Pest Control, PO Box 910, Kununurra, WA 6743.

Mr M.R. NEWTON, Department of Agriculture, Northfield Research Laboratories, GPO Box 1671, Adelaide, SA 5001.

Mr G.S.J. O'REILLY, 14 Virginia Place, West Pennant Hills, NSW 2125.

Mr D.G. PHELPS, LAZRI, PO Box 519, Longreach, QLD 4730. Changes from student to full membership.

Mrs A.A. POUND, 16 Knutsford Street, Chermside West, Qld 4032. Changes from student membership to full membership.

Miss A.M.E. ROACH, PO Box 295, Queanbeyan. Changes from full membership to student membership.
Dr C. SATASOOK, Department of Biology, Prince of Songkla University, Haad-yai, Thailand 90112.
Dr J.K. SCOTT, CSIRO Division of Entomology, Private Bag, PO Wembley, WA 6014.
Mr A.M. SMITH, Institute of Plant Sciences, Swan Street, Burnley, VIC 3121.
Mr G.R. STRICKLAND, Kimberley Entomologist, Department of Agriculture, PO Box 19, Kununurra, WA 6743.
Mr I.J. TITMARSH, Entomology Branch, Department of Primary Industries, PO Box 201, Biloela, QLD 4715.
Mr P.J. WELLS, 16 Kennedy Street, Kingsford, NSW 2032.
Ms M.A. Williams, Department of Primary Industries, St Johns Avenue, New Town, TAS 7008.
Dr A. YORK, Forestry Commission of NSW, Wood Technology and Forest Research Division, PO Box 100, Beecroft, NSW 2119.
Ms C.M. YULE, c/- Mr G.V. Lewis, PO Box 269, Balikpapan, Kalimantan Timur, Indonesia.

Deaths

The Executive recorded with regret the death of Mr D. McArdle of WA.

From the Minutes

Applications for the Phil Carne Student Prize and the Australian Entomological Society Research Grants are called for elsewhere in this News Bulletin. The Executive is looking for a big response to these.

The appointment of Mr Bernie Franzmann as one of the three regional councillors for Queensland has now been approved. Dr Grant Farrell has resigned as Victorian regional councillor following his transfer to the NT. The Executive have expressed their appreciation of his work. Dr Gordon Hooper has resigned from the Editorial Board of the Journal and the Executive have also thanked him for his contribution.

The considerable activity of the Conservation Committee can be seen from their reports in ***Myrmecia***.

Australia Post informed us that in April they will be issuing a series of four stamps depicting insects, illustrating a hawk moth, a jewel beetle, Leichhardt's grasshopper and the cotton harlequin bug.

Regional News

QUEENSLAND

SOUTH EAST QUEENSLAND

Mount Glorious Biological Centre

On December 11 the opening of the live butterfly display in the tropical plant dome at Brisbane's botanic gardens was conducted by Lord Mayor, Sallyanne Atkinson. After weeks of frantic butterfly breeding and pre-opening jitters by Tony and Kate Hiller of the Mt Glorious Biological Centre, who have the breeding contract to supply the dome, the event went off perfectly. Sallyane, dressed in brilliant clothes and carrying a nectariferous bouquet was mobbed by starving butterflies (not to mention the adoring media!)

Lord Mayor (left) and Tony Hiller at the butterfly display opening

Queensland Institute of Medical Research

Mohamed Mekhamer from the Australian Quarantine Inspection Service, Melbourne, Victoria, will be visiting the last week in January and the first week in February to learn some taxonomy; he will also be visiting Mike Muller and David Kemp at CSIRO, Bob Domrow at the Queensland Museum, and both Pat Marks and Ian Fanning at QIMR.

Michael Brown is continuing work at North Stradbroke Island trialing *Mesocyclops aspericornis* in rain water tanks for larval mosquito control.

The University of Queensland

Gimme Walter has returned from seven months study leave, which he spent in the lab of Erkki Hankioja (well known for his work on insect induced responses in plants) in Turku, Finland. He was lucky enough to have most of his experimental work (on sawfly sex ratios) in the field in the subarctic. His theoretical interests took him to Estonia, Lund and Hamburg.

Myron Zalucki and Glynn Maynard took a flying trip to Windorah and back on 8-10 November to sample *Heliothis* on their native host plants and to collect bees, the trip was successful for both. They crossed paths with Graeme Hamilton, a former student of Myron, at Dulacca. Graeme was spotting locusts for the Plague Locust Commission. Myron is also pleased to report that the book he has edited for Springer- Verlag, "*Heliothis* - Research Methods and Prospects" has gone to the printers and is due out shortly.

Visitors in December were, Gerry Cassis from the Australian Museum, Sydney to study Dermaptera and Dr Kirejtshuk from Russia to study beetles in the family Nitidulidae; in January, Mr Franz Watchel from Germany visited to examine beetles in the family Trogossitidae.

CSIRO, Long Pocket

Richard Kassulke sadly passed away on 21 January, he had been with CSIRO for 23 years with a career in biological control of weeds right from the beginning. An obituary appears elsewhere in this issue.

Peter Room went to Kenya and Zambia at the beginning of December to release *Salvinia* beetles, and Mick Julien will take beetles to Fiji in early February. This will then complete the extension of the biological control of *Salvinia* to all countries that have requested assistance.

Wilco Liebregts visited Don Sands at Long Pockets Labs early in January to discuss progress with biological control of fruit piercing moths in Western Samoa.

Bob Sutherst talked about CLIMEX at the WMO/EPPO/ NAPPO symposium on "Practical Applications of Agrometeorology in Plant Protection" in Florence, Italy in early December. He spent the next week consulting for FAO and IAEA in Libya and Austria, in relation to the North African Screwworm fly eradication program. Gunter Maywald also talked about CLIMEX when he attended "The International Quarantine Congress" in Kuala Lumpur in January.

DPI Entomology Branch

Rod Elder (Rockhampton) and Bill Ballard (CSIRO, Canberra) spent 9 days researching the blackfly (*Austrosimulium pestilens*) outbreak which accompanied the floods at Rockhampton. The whole of the Fitzroy basin had a massive outbreak resulting in stock losses and human irritation. Bill was flown up jointly by DPI, State Emergency and Rockhampton City Council to advise on the problem. While on the job Bill and Rod obtained data on diurnal variation in biting habits, daily population levels, and host range. Another species *A. bancrofti* was also collected in much smaller numbers.

The Toowoomba laboratories received two visitors. Peter Cole from the Dept. of Agriculture and Rural Affairs, Burnley discussed aspects of noctuid biocontrol with Dave Murray and Brad Scholz. Ideas were exchanged on culturing methods for the *Heliothis* larval parasitoid, *Microplitis* and the *Trichogramma* egg parasite research. Dr Jeff Aldrich of the USDA Insect Neurobiology and Hormone Laboratory, Beltsville, Maryland discussed various aspects of his Heteroptera pheromone research.

Judy Grimshaw (Indooroopilly) will be out on field work for most of February; spending one week at Bamaga, two at the three Torres Strait Islands closest to PNG (Saibai, Dauan, and Boigu) and one visiting 8 locations on Cape York Peninsula. The task is to set pheromone traps, change fruit-fly traps and look around for possible pest species of insects, all whilst avoiding getting too wet, in case she shrinks any smaller.

Queensland Museum

Robert Raven was back in New Caledonia again in December, this time to participate in a joint expedition with French entomologists from the Paris Museum to Mt Panie, New Caledonia's highest peak.

Dr Hilke Ruhberg from Hamburg, Germany, spent a fortnight in February working with the collection of Onychophora (peripatus or velvet worms) as part of her wider studies on the fascinating Australian fauna of these secretive creatures. From Brisbane she goes to Tasmania for a week before returning home.

A 3-week collecting trip to the North Queensland mountains in November-December by Geoff Monteith, Geoff Thompson, Rae Sheridan, Heather Janetzki and Doug Cook included a 6-day back-packing venture into the remoter

parts of the Carbine Tableland, west of Mossman. This extensive, high-altitude wilderness area has yielded many relict species in recent years, including the rare stag beetle (*Sphaenognathus*), true funnel web spiders (*Atrax*), new winglwess carabids, and the NZ-related bark bug (*Kumaressa*). The party also established many trap stations in the Mt Finnigan area, south of Cooktown. These were subsequently monitored for 5-weeks into the wet season by this year's 60-strong ANZSES Expedition. The rich catches are now back in Brisbane and being processed by Judy Cantrell who is employed from a badly-needed grant of $33,000 Geoff has received from federal funds to assist processing of backlog bulk collections of rainforest insects.

The Dodd Collection of tropical insects has been chosen to become a travelling display to regional centres (mostly art galleries) in Queensland, hopefully opening in Rockhampton in mid-April and then moving to another nine centres over the following 12 months. It is planned to take the collection temporarily "home" to Kuranda, the township where F.P.Dodd formed the collection early this century and achieved fame as "The Butterfly Man of Kuranda". Geoff Monteith is preparing a booklet on the Dodd family to be published in conjunction with the travelling display.

Ted Dahms has been seconded to another department for three months (Feb–April) for administrative duties. A field trip to the Charleville area with Gudrun Sarnes to collect Microhymenoptera is planned after his return to the Museum in May.

Queensland University of Technology

The following two entomological postgraduate projects are currently being undertaken at QUT.

Biology of wingless cockroaches *Calolampra solida* Roth and Princis and *C. elegans* Roth and Princis — Raelee Whyte. Master of Applied Science.

Biology of the black field earwig *Nala lividipes* (Dufour) in central Queensland - Gordon Simpson. Master of Applied Science.

Des FOLEY (per Glynn Maynard) &
Bernie FRANZMANN
Regional Councillors

NORTH QUEENSLAND NEWS

Heavy rains kept visitors and activities down in the far north of Queensland. Harry Fay returned to Mareeba DPI from 4 months in Vienna. Ross Storey spent 10 days chasing beetles in a very dry Mt Isa. A few jewel beetle fanciers chased the rains, while others were kept out by them. Ray Clark spent a couple of weeks here and he was followed by Shelley Barker from Adelaide. Friends of Ernie Adams in Edungalba will be happy to know that he escaped most of the flood problems that hit Rockhampton.

Ross STOREY
Regional Councillor

AUSTRALIAN CAPITAL TERRITORY

CSIRO Division of Entomology

Penny Greenslade spent 2 weeks recently on a trip to Macquarie Island with Rieks Van Klinken, funded by the Antarctic Science Advisory Council. She and Roger Farrow have been monitoring windblown insects and doing ecological studies on the insect fauna of the island, which, not too surprisingly, includes 30 species of collembolans. Rieks will be there for 4 months, and although Penny only had 5 days on the island, she did find a moment to talk to the penguins.

Chris Whittle, Richard Vickers and Eric Rumbo went to New Zealand for a week to visit Max Suckling in Christchurch and John Clearwater in Auckland to discuss common interests in pheromone control of tortricids.

Stored grain staff have been travelling westwards. Jonathan Banks and Julie Carter went to Western Australia in November to have talks with Co-Operative Bulk Handling and to see a fumigation of hay in sealed containers destined for Japan. In January, Jane Wright and Barry Longstaff spent a week in rural WA to inspect storage facilities and discuss future research then touched down in Canberra for about 22 hours before driving to South Australia with Noel Starick to set up a field trial. Jonathan Banks, David Evans, Jim Desmarchelier, Barry Longstaff and Bob Winks attended a workshop in Werribee in December on pesticide resistance in stored grains that was co-sponsored by the Australian Wheat Board and the Grains Research and Development Corporation - Wheat Committee. Jane Wright has just

welcomed Mick Neave and Liz Sinclair to her lab. Mick has been with the sheep blowfly program for many years, and Liz has just completed her degree at the ANU.

Roger Farrow travelled to Florence, Italy in December for the World Meteorology Organisation/European Plant Protection Association Symposium on practical applications of agrometeorology in plant protection. Roger presented a paper on the implications of potential global warming on Australian agricultural pests. Rosa Paiva, from the University of Lisbon, has joined Roger for her sabbatical to work on biological control of *Phoracantha semipunctata*, an Australian cerambycid which has became a pest of *Eucalyptus globulus* in Europe and elsewhere.

Tony Wapshere has been travelling in Chile and Argentina to look at the potential for biological control of blue heliotrope and Bathurst burr. David Briese, the C-I-C in Montpelier, France, had a quick visit back in Australia in January. Peter Hodge from NSW Agriculture and Fisheries will be in Canberra for 6 months, doing host-specificity testing of *Leucoptera spartifoliella*, a biological control agent of Scotch broom, recently received into quarantine in Canberra from New Zealand. Approval has been received to release the rust fungus, *Uromyces heliotropii*, against common heliotrope, a weed that costs Australia over $46 million annually. Testing of the pathogen took six years, so it was champagne time for the weeds group when the approval came through. Releases will be carried out in WA and NSW in co-operation with state officers and local collaborators.

Max Whitten visited Stockholm in December as a participant in a workshop on the prospects for creating an international biosafety advisory panel that would be able to review the biosafety issues associated with specific releases of transgenic organisms.

Alistair Drake has left the Division to become a lecturer at the Defence Force Academy in Canberra. He will continue with his entomological radar work, and to this end has Alan Smith from NRI, Chatham, UK visiting to collaborate on a project on vertical beam radar to monitor over-flying insects.

When last seen, Tony Watson and Hilda Abbey were recovering from a bout of indexing for the dragonfly book. Tony went to north Queensland in November\December to take some last minute photos for the book with Richard Rowe of James Cook University.

Phil Spradbery is still chasing European wasps, and reports the finding of the second nest in Canberra this season.

Geoff Foster went to the Americas as part of a technical mission to devise a screwworm fly preparedness plan for Australia. He visited medfly rearing facilities in Hawaii and Mexico and screwworm fly rearing and release facilities in Mexico and Guatemala. On the local front, Geoff reports that sheep blowfly mass rearing is being automated and that they have surmounted the initial teething problems with the equipment.

Bureau of Rural Resources

While on a trip to the UK, Matt Cahill visited Andrew Farnham and Ian Denholm at Rothamstead Experimental Station, who are very proud of their new insectary facility (1 million pounds sterling approx) complete with all the mod cons. Their new simulator to study insecticide resistance management options including parasitoid effects on populations on whitefly (and other arthropods) is most impressive and promises some exciting new concepts in IRM. He also visited Andrew King at NRI in Chatham and ICI at Jeallots Hill (still interested in *Helicoverpa* resistance).

Department of Primary Industries and Energy

Tony Molyneux has been promoted within the Agricultural and Veterinary Chemicals Unit with duties involving administration and policy formulation on broad issues affecting the use and clearance of agricultural chemicals in Australia. Fortunately he is managing to keep his entomological interests alive by studying Protura from Tasmania and Western Australia in spare moments with assistance from Bruce Halliday.

Jane Wright
Regional Councillor

ANIC and ANU

This report starts with the Australian National University entomologists, since several of them have decamped to ANIC while their Zoology building is revamped to arise phoenix-like as the Division of Botany and Zoology or BoZo. Ting Kui Qin is working all hours in compiling a data matrix to analyse cladistically with MacClade, PAUP and Henning89. Ting Kui is trying to use phylogeny and biogeography to establish the country of origin of *Ceroplastes sinensis*, and hence enhance the chances of

finding appropriate biocontrol agents. John Trueman has set himself an equally daunting task in reassessing the phylogeny of the odonates, also with the aid of computerised parsimony programmes. In both cases some initial enthusiasm for seeking assistance from molecular (sequence) data appears to be working as problems of method, expense and analysis become evident (at least to those attending "Coopers and Cladists").

Nick Drayson's initial part-time studies for MSc have been rewarded with a scholarship to study *Cricotopus* full-time. Nick's expertise at making slides of pesky little midges will now be restricted to those he actually studies and your correspondent is on the lookout for assistance. Alison Roach continues her honours studies of *Anthrenocerus* (Dermestidae) with some electrophoretic work on species held in culture in the Stored Grain area. Chris Reid, newly awarded his doctorate, escaped the demolition squad by heading for European Museums, visiting especially Paris and London, where there are still some extant coleopterists.

Penny Gullan cunningly located her students in ANIC but found herself a broom cupboard in the (ex-) Botany Department, a location which, combined with vacations, has left her relatively unmolested. The return from sabbatical leave of incoming Professor Andrew Cockburn and her responsibility for this year's honours programme should end this seclusion.

ABRS funded myrmecophile Steve Shattuck has been out in the field, in western New South Wales followed by central Queensland. Alexander (Sasha) Kirejtshuk (Zoological Institute, Leningrad) spent several weeks looking locally at our Nitidulidae, but spent time on a very comprehensive collecting trip to Dorrigo and New England with Tom Weir and Andrew Calder. John Larwence accompanied Sasha to Brisbane, where QDPI and Queensland Museum collections were examined and Mount Glorious vacuumed clean of entomofauna, before Sasha returned to the Soviet Union in mid-January. Darren and Lisa Pollock, Canadians from the University of Alberta (or the George Ball Systematics School) have been using Canberra as a base for their studies on the coleopteran family Pythidae.

It has not been only our visitors who have been wandering the hemisphere and it is time to admit that this correspondent has been absent in the field for much of the past quarter, as have other taxonomists. Pete Cranston searched for the few Western Australian chironomids that Don Edward missed and Penny Gullan collected scales and galls on the south-west's amazing plants. One evening a motley collection of cladistically inclined systematists (Mark Harvey, Don Edward, botanists Jenny Chappill and Jim Armstrong) and an entomo- limnologist turned wetland ornithologist (Andrew Storey) joined Penny and Pete for a social alternative to the IUCN (International Union for the Conservation of Nature) extravaganza also being held in Perth, with Ebbe Nielsen amongst those attending.

Correspondents in other states may have seen more of Ebbe, most recently as part of the ANIC/Tasmanian wilderness survey. Ian Naumann and Tom Weir formed part of the first cohort to erect, maintain and empty a multitude of traps at Pelion and Melaleuca. Ian's pleasure about leaving *Insects of Australia* was increased by the discovery of a brachypterous sawfly, the first from Australia. At the time of writing, the second wave of Ebbe and Ted Edwards have pinned 3,000 lepidopterans in their first week, a richness previously associated with areas such as the McIlwraith Range (soon to star on Quantum). Upon the lepidopterists' return, Andrew Calder and Walter Dressler resume the quest for Tasmanian insect biodiversity by the kilogram.

Angela Arthington's aquatic group at Griffith University continue to receive sporadic visits from Pete Cranston, who is trying to associate chironomid larvae from the group's research streams with the more usually named adult flies. This January's visit coincided with maximum flow in north Queensland's rivers but stagnation in the southeast of the State. Stradbroke Island's lakes provided a more interesting, less polluted fauna. Penny Gullan took the opportunity to raid QDPI's excellent *Ceroplastes* slide collection for Ting Kui's studies, and visited the Queensland Museum seeking material for Jo Berry's pteromalid PhD.

Ebbe Nielsen is the proud recipient of the 1990 Rivett Medal for research excellence in biological sciences - recognition of Ebbe's systematic work and his role in increasing awareness of the importance of insects in conservation strategies. Well done, Ebbe.

Jo Cardale is spending the summer at the computer console, gradually completing the index to *Insects of Australia* as the publishers provide final pagination. All page proofs are now received and the second set of correct proofs are arriving. A mid-year publication date still seems feasible.

Sandra Macdougal's expertise in sorting Diptera from the Christmas Island survey is being put to good use as she sorts Roger Kitching's canopy fogged samples here in ANIC. British Museum coleopterists Peter Hammond and Nigel Stork have blitzed the insecticided beetles in Armidale and now disperse to the Daintree and, in Peter's case, Canberra, for a brief visit.

Pete CRANSTON
Regional Councillor

WESTERN AUSTRALIA

This is the time of year when things are a bit quiet over here, due to the festive season and people being away on holidays. However, there was a large gathering of entomologists and their partners in December. This evening of gregarious feeding took place at the Windsor Hotel to celebrate Christmas and the New Year. Apart from that, the following events took place.

Department of Agriculture

David Cook has recently returned to WA after completing the first year of his post-doc in Canberra with CSIRO. Despite battling sub-arctic conditions, David claims he gained a wealth of knowledge on the object of the study, namely the Australian sheep blowfly, *Lucilia cuprina*. He will be undertaking the second year looking at the mating system of the fly from within both the WADA and CSIRO in Floreat Park where the warm salt air and cry of seagulls should provide a more congenial research environment.

Kevin Richards, in charge of the WADA insect reference collection, received some visitors within the last few months. Shelley Barker expertly sorted out the *Castiarina* buprestids in very quick time. John Owen from the UK looked through the beetle collection and was particularly interested in the staphylinids, carabids and elaterids. Elsa Dexter recorded label data from butterflies collected in WA to include in the UNE butterfly project data base. Finally, Ebbe Nielsen called in to have a quick look at the hepialids, pyralids, torticids and some of the other lepidopterans.

Ian Dadour and Al Lymbery have organised an Evolutionary Biology Group which will meet twice per year. The first meeting will be in March and the theme is Sexual Selection. Speakers are Leigh Simmons (QEII Fellow) talking on sperm competition in the yellow dung fly, and Todd Shelley (ARC Fellow) on the mating system of a desert grasshopper. Rob Emery is currently on long service leave after he and his wife, Dale, became proud parents of a healthy baby boy, congratulations Dale and Rob.

Agriculture Protection Board

A second generation of locusts is currently hatching on the outskirts of the Perth Metropolitan area. Therefore even larger numbers of locusts than the previous one are now expected to invade residential areas. The European wasp programme is running smoothly at the moment. WADA Technical Officer, Paul Wilson, has been busy investigating trap designs and a range of attractants including various kinds of meat and beverages. This is in order to set up a surveillance of the wasp around the metropolitan area. So far around a dozen nests have been found, far less than last year's figure.

WA Museum

The entomology section got brief visits from the following people: Ian Common, in October, Drs Scott Armbruster (University of Alaska) and Chris Watts in November, Penny Gullan, Peter Cranston, Andy Austin and Ebbe Nielsen in December. With the return of summer, Terry Houston resumed his study of pollination biology of the Morrison feather flower, *Verticordia nitens*, in league with Byron Lamont, a botanist from Curtin University. The plant appears to have a single solitary bee pollinator which is dependent upon it.

Conservation and Land Management

Janet Farr reports that the gum leaf skeletonizer survey is going well after the training sessions in September-October. Staff from all Districts in the south-west gave a good response. The survey is winding up at the end of this month, and Janet hopes to repeat it next year.

CSIRO

After visits from Ebbe Nielsen and Tim New, Amanda Annells and crew have carried out a survey of wool moths for Marianne Horak in Canberra.

John Van SCHAGEN
Regional Councillor

TASMANIA

Department of Primary Industry

Margaret Williams has established a large culture of codling moth on an artificial diet preparatory to quarantine control experiments for export apples. Margaret's integrated mite control work is progressing well with the development of economic injury levels for two spotted mite on hops. This is based on establishing and maintaining plots with graded levels of mite activity. Margaret has also begun work on mating disruption of light brown apple moth and codling moth in apple orchards. Lionel Hill and Peter McQuillan received visits from ANIC lepidopterist Ebbe Nielsen and Ted Edwards who were collecting in the World Heritage Area. Peter was diverted from entomological duties by the necessity to be acting chief of the Plant Protection Branch.

University of Tasmania

Jean Jackson in the Zoology Department is writing up her PhD thesis on the systematics of trichopteran families Coenosuchidae, Helicopsychidae and Calocidae. Jean concentrated on larval and pupal stages using karyology, electrophoresis and morphology. Ebbe Nielsen and Ted Edwards collected parts of the J.L. Hickman invertebrate collection for ANIC following John Hickman's retirement. Ebbe and Ted also picked up the private G. Ellis Lepidoptera collection and visited lepidopterist Len Couchman.

Tasmanian Museum and Art Gallery (Hobart)

Alison Green is identifying terrestrial isopods from Robin Coy's 1989 Tasmanian Rainforest Survey. Heather Mitchell of University of New England visited to obtain data on selected Tasmanian butterflies for Roger Kitching's WWF project on conservation of Australian butterflies. ANIC lepidopterists Ebbe Nielsen and Ted Edwards examined the collection with particular reference to Cunningham specimens.

Queen Victoria Museum (Launceston)

Tim Kingston has employed recent University of Tasmania graduate Louise Manka under Plomley Foundation funds to sort all non spider material from Tracey Churchill's survey of coastal heathlands. This material will be available to researchers. Bob Mesibov has distributed specimens from a matched site comparison of two rainforest sites, one in north-east Tasmania and the other in the north-west. The Plomley Foundation funded the study which was based on equal time handpicking in three large circular plots at each site. Michael Fletcher has worked as a volunteer curating the collection, preparing children's displays and setting up a live gum moth (*Opodiphthera helena*) rearing display.

Department of Parks, Wildlife and Heritage

Steven Smith has established WEBS (Wilderness Ecosystems Baseline Studies) at two locations in the Tasmanian World Heritage Area in conjunction with ANIC and others.

Stephen has about 60 specialist studies underway at the two baseline sites, including many for invertebrates. Results will be published in a summarised form for the public. Mark Neyland is investigating the alpine butterfly *Oreixenica ptunarra* Couchman under the ANPWS Endangered Species Program.

Lionel HILL
Regional Councillor

NORTHERN TERRITORY

NT Museum

The Museum and Art Galleries of the NT has a Curator of Entomology again. Alice Wells took up the position in mid November, bringing enthusiasm and aspirations for the development of the collection and for the continuation of her research on Australian and SE Asian caddisflies. She hopes to encourage entomologists to visit the Top End for their own interests, hopefully with spin-offs for the Museum collection. Let her know if there is any particular group you'd like her to look out for!

CSIRO — Division of Wildlife and Ecology

Alan Andersen (author! author!) announces the forthcoming publication of "The Guide to the Ants of Southern Australia". (Available late February/early March from CSIRO Press Publications). Alan also reports that OSS has agreed in principle to fund a two year project looking at the role of ants in mine site restoration. The project will consider both the ecological role of ants in promoting restoration and their role as bio-indicators. Alan will be participating in a trip (is this the right word?) to Brazil to "initiate collaborative research on insect herbivory in tropical

savannahs". Recent visitors to CSIRO included Prof Naomi Pierce from Princeton University for discussions on lycaenid-ant interactions. Alan is expecting visits from ant taxonomists Dr Steve Shattuck and then Dr Donat Agosti to pursue their interests in *Iridomyrmex* and *Melophorus* respectively.

NT Health — Medical Entomology Branch

The wet season has come to the Top End and at this stage it looks like being a beauty. Unfortunately the combination of high tides and high rainfall has proved ideal for *Aedes vigilax* right around the Territory coast, with the Branch receiving complaints from as far afield as the Roper River.

In Darwin attempts to stay on top of the *Aedes vigilax* population have kept Gwenda Hayes and Graeme Dobson on their toes. Despite modern technology adverse weather has, to coin a phrase, interrupted operations.

Wendy Kelton has been on leave since before Christmas and is due back at the end of January. Peter Whelan went on a month's leave in mid January, leaving the Branch in the care of Tricia Fox, Gwenda Hayes and Graeme Dobson. No doubt it will recover in due course.

The Branch is expecting a visit from the Army under Captain Yves Stanislas from the 6th February to conduct an *Aedes aegypti* survey of caravan parks and freight terminals in the Darwin and Katherine areas. Mosquito and *Culicoides* surveys of Cox Peninsula and Gunn Point are continuing, and Gwenda's flies are hovering on the horizon again.

Office of the Supervising Scientist — Alligator Rivers Region Research Institute

The Top End has enjoyed weeks of monsoonal weather at last - but still we ask, "Is it a REAL Wet?" The Biological Monitoring section will be continuing a project on the stream invertebrate fauna of artificial substrates throughout this wet season. The project aims to establish a monitoring technique for assessment of the effects of discharges of mine waste water. Peter Dostine is optimistically predicting that data collection for the South Alligator River/Coronation Hill benthic invertebrate project will be finished by June. Recent visitors to ARRRI include the above-mentioned Dr Alice Wells on a mission to demystify ARR caddisflies.

DPIF — Entomology Section

Stuart Smith and Deanna Chin visited Alice Springs to continue trials on *Parlatoria* scale in date palms, and slow release insecticide trials on termites in grape vines. The section has dealt with a large number of extension enquiries mostly on termite control following their usual wet season exuberance. Meanwhile attempts to establish laboratory thrip cultures are continuing for both *Thrips palmi* and Redbanded Thrip *Selenothrips rubrocinctus*. Dr Mali Malipatil from the Victorian Department of Rural Affairs (and also ex-NT Museum) visited to discuss current cashew projects at Wildman River.

DPIF — Weeds Section

Colin Wilson reports the arrival of recruit Carey Smith (recently of CSIRO Entomology - Canberra). Carey will be engaged in rearing the Mimosa moth *Carmenta mimosa* on an artificial diet — early rearing results are promising.

Peter DOSTINE
Regional Councillor

VICTORIA

Department of Agriculture and Rural Affairs, Institute of Plant Sciences, Burnley Campus

Four DARA research institutes: the Plant Research Institute, Burnley; the Vegetable Research Station, Frankston; the Horticultural Research Institute, Knoxfield, and the Potato Research Station, Toolangi have been amalgamated into one large institute known as the Institute of Plant Sciences, consisting of the four campuses.

Paul Horne is investigating the feasibility of inundative releases of hymenopterous parasites to control potato moth in tomato and potato crops. He hopes to recover parasitised larvae from the field in the near future to assess the effectiveness of the method. Similarly Peter Cole, Peter Ridland and Ian Faithfull, have been busy lately with releases of the Moroccan clearwing moth, *Chamaesphecia doryliformis*, a potential biological control agent of dock (*Rumex* sp.). Eggs were obtained from the WA Department of Agriculture and newly hatched larvae have been released onto dock plants at sites at Ellinbank, Kyabram and Kerang. At each site, 300-450 plants have been inoculated. The moth has a one year life cycle, with adults expected to emerge in September. Peter Cole visited DPI in Toowoomba

and Brisbane in December to discuss *Heliothis* research and parasitoid research with David Murray, Brad Scholz and Bob Teakle.

Peter Williams and Andrew Henderson attended a "Resistance Workshop" organised by the Australian Wheat Board held at the Academy of Grain Technology, Werribee in December. It was held in view of the potentially serious consequences of insecticide and fumigant resistance in major insect pest species, coupled with the pressure for lower levels of protectants and fumigants and the effects of deregulation on the control of insects in grain storage. Peter Williams also attended a meeting of the National Health and Medical Research Council in Melbourne in December to provide information on the use of fumigants in stored products in Australia and to participate in discussions on this matter.

Garry McDonald has submitted his (5.5 pound) PhD thesis on common armyworm ecology (*Mythimna convecta*).

Bill Frost has left Burnley to begin a PhD at the Waite Institute, SA. As yet he is undecided as to which project or scholarship to accept. The projects which he was working on at Burnley will be continued by Garry McDonald (endophyte in ryegrass) and Gordon Berg (redlegged earth mite).

Peter Hunt's contract with DARA expired and, unfortunately, was not renewed. However, Peter has taken advantage of the enforced break from paid work and has enrolled in a journalism course.

Monash University, Department of Genetics and Developmental biology

Martin Taylor, Princeton University (USA), visited while in Australia on a Christmas visit to see family and friends. He provided useful discussion and information on PCR studies in *Heliothis* mitochondrial and genomic DNA.

Alex Agrotis has submitted his thesis, Paul Matthew is soon to submit and Jenny Ross has finished lab. work and is furiously writing up.

Steve McKechnie is heading to America for a month in March-April 1991. He plans to attend the *Drosophila* Conference in Chicago. Following this he will be visiting Bill Geer, Knox College, as well as several *Heliothis* labs.

La Trobe University, Department of Genetics and Human Variation

Ross and Ching Crozier have re-established the laboratory at Bundoora after the move from Kensington, and Ross is well along the learning curve of adjusting to a new University. The sequencing of the entire honeybee mitochondrial DNA genome is progressing well and should be finished during 1991, and Ross is struggling successfully with making time to write up a further instalment of this work. Stella Koulianos accompanied Ross to La Trobe and will continue with her genetical survey of Australian honeybee strains for a PhD. Ching, Stella and Ross have devised a test for Africanised honeybee mtDNA that works rapidly and accurately except for a similarity between Africanised bees and a pesky Spanish subspecies, *Apis mellifera iberica*.

Lars Jermiin joined Ross at La Trobe and is set to resolve major questions of ant phylogeny using mtDNA, and tackle some major biogeograhic questions using this information. Some ant mtDNA sequences have been determined: watch this space for developments!

Penny Kukuk has also shifted from Kensington to Bundoora, and has continued her pathbreaking studies on Australian halictines. She has even expressed an interest in halictine mtDNA...

We congratulate Mike Schwarz for gaining a senior ARC postdoctoral fellowship. He will now be co-hosted by the Departments of Zoology and Genetics & Human Variation, and will continue his work on allodapine bee biology. Mike and Penny have also been pursuing a study on the impact of honeybees on native bee fauna using funds from a grant from the World Wildlife Fund for Nature.

Roger Lowe is beginning a postgraduate degree on spider sociality and its causes, to combine behavioural, ecological and genetical information.

Expected addition: James Cook will be voyaging to Australia to join Ross's laboratory in April, to be supported for two year's work on ant genetical sociobiology by a Royal Exhibition of 1851 Fellowship.

Absent friend: Risa Rosenberg, who was part of Ross's group at UNSW, will rejoin the rest of the crew when she recovers from severe health problems that have laid her up in Sweden.

Ary Hoffmann is continuing his active collaboration with US researchers on the ecological, molecular (yep, mtDNA) and quantitative genetics of *Drosophila simulans*, and will

take part in an exchange programme with Dr Mike Turelli (University of California, Davis). Ary is also engaged with Steve McKechnie (Monash University) in ARC-supported studies on mtDNA and quantitative genetic variation in *Heliothis*.

Christian Peeters visited briefly during January, while on his way to take up a year's fellowship with Dr Bert Holldobler (University of Wurzburg). Christian hopes to return to Australia after that to continue his work on ponerine ants, this time using his skills to tackle sex allocation questions.

Melbourne University, Genetics Department

The department has fared very well from ARC for 1991, receiving funding for 5 grants on various aspects of the genetics of insects, for a total of $151,000. One grant of particular interest to entomologists was the joint grant to Jon Martin, along with Charles Webb at Northern Territory University and Pete Cranston at Division of Entomology, CSIRO, to study the biosystematics of the genus *Chironomus* using a multidisciplinary approach.

Five honours students will be working on insect-related problems in the department this year. This is about the limit the sheep blowfly, chironomid and drosophila groups can manage. However, the bad news is that there are no graduate students coming into any of these groups this year - seems to be a sign of the times, with graduate students hard to attract because there is still no perceived employment path in Australia.

Rick Roush, from Cornell University in New York State, visited the department briefly in January to talk with the insecticide resistance group, although Rick was supposedly on holidays.

CSIRO, Division of Forest Products, Clayton

Two major administrative decisions have occurred since last September, namely, the Wood Science and Technology Group moved from Highett to Clayton, and as of 1st January 1991, the Division of Forestry and Forest Products ceased to exist, and has been renamed Division of Forest Products. Interestingly enough, this name change has taken almost 20 years gestation. John French says that when he joined CSIRO in 1972, Forest Products was renamed and absorbed by Building Research. Since then, he has been in the Divisions of Chemical Technology, Chemical and Wood Technology, Forestry and Forest Products, and now back to Forest Products. Meanwhile, basically researching in the same area all these years — so what's in a name!

Dr Joe Mauldin, termitologist, USDA Forest Service Research Laboratory, Gulfport, Mississippi, visited in November during the Forest Products Research Conference at Clayton. He presented an excellent overview of termite research in the USA, and joined John French on a trip to see at first hand *Coptotermes lacteus* in the Boola Boola State Forest near Erica in central Gippsland.

John French was overseas from 28 November to 14 December, 1990. He was invited to present a paper at the Annual Meeting of the American Entomological Society in New Orleans (2-6 Dec.), "Use of biological information in termite control" - a symposium to honour the late Professor Jeffery La Fage (he was murdered by a mugger in the France Quarter of New Orleans in July, 1989). Eighteen papers were presented at this symposium, and they will be published in a special edition of Sociobiology later this year.

While on route to New Orleans, John dropped into Hawaii, and visited with Professor Minoru Tamashiro, and his colleagues, Ken Grace, Don Ewart (ex-LaTrobe and Melbourne Univ.) and Julian Yates. A visit was arranged with Ameron H.C. & D. at their Kailua quarry to see the manufacture of the Basaltic termite barrier material. The marketing of this termite barrier is slow, particularly with the problems of warranty and litigation that seems to trouble the North American souls.

On a visit with Don Ewart to the Bishop Museum, Honolulu, John met Dr Robert Cowie, late of the Overseas Dev. Nat. Res. Instit., Chatham, UK, and an ex-colleague of Tom Wood when Robert worked on termites. His new love is snails! Meanwhile in Australia, Jim Creffield journeyed to the Darwin area for termite inspections and collections with the Division of Entomology team.

Museum of Victoria, Invertebrate Survey Department

The department has been fairly quiet with continuation of the grant projects. Alistair Cameron has completed field work on the swamp invertebrates of the western region of Melbourne, and is about to prepare the final report.

Alan Yen has returned from his Esso-funded trip visiting live invertebrate displays in the USA, the UK and Malaysia. He was away for three months, spending most of his time at the Smithsonian Institution, Cincinnati Zoo and the London Zoo. Beside the live invertebrate displays themselves, Alan also looked at conservation breeding programmes,

educational programmes and a few other matters at places such as the Institute of Terrestrial Ecology at Monks Wood and Furzebrook, the NCC at Peterborough and the Field Studies Centre at Shrewsbury.

While on the subject of invertebrate conservation, Alan has also been given the Australian National Parks and Wildlife tender to prepare an overview on the conservation of non- marine invertebrates in Australia. This is a twelve month project. More of this in later issues of "Myrmecia".

Department of Conservation and Environment, Keith Turnbull Research Institute

John Scott, a CSIRO entomologist based in Perth, visited KTRI in December, John conducted field work to determine the base line growth data of boneseed in Australia so it can be compared to its growth in its area of origin in South Africa. Such information will help John determine the damage potential of some of the possible biological control agents to be imported for the control of boneseed in Australia.

Raelene Kwong has been appointed to work on biological control of elm leaf beetle. Host specificity studies have been completed and the first release of the egg parasitoid *Tetrastichus gallerucae*, was made on the 20th December, 1990, at Mount Eliza on the Mornington Peninsula.

Tom Morely has recently attended an alpine ecology workshop. He later visited the CSIRO Division of Entomology in Canberra to learn rearing techniques for insects imported for the biological control of Patersons Curse. A weevil, *Ceutorhychus larvatus*, is currently undergoing mandatory quarantine requirements at KTRI and will then be released.

Frank Gigliotti and Robert Jaede visited Flinders Island at the request of the Furneaux Forests Co-operative to undertake an inoculation programme against sirex wood wasp. Pine trees attacked by sirex were inoculated with the parasitic nematode *Deladenus siricidicola*. Ninety sirex-attacked trees were inoculated with a total of approximately 12 million nematodes. The inoculation should result in a significantly reduced sirex population in two years' time.

Janet HORNE
Regional Councillor

SOUTH AUSTRALIA

South Australian Museum

Eric Matthews and Jan Forrest collected on Kangaroo Island in early November, taking advantage of trapping sites and facilities established for a National Parks and Wildlife Services vertebrate faunal survey going on at the same time. Collecting was reasonably good in spite of cold nights.

Dr Walter Borsato (Civic Museum, Verona, Italy) dropped in briefly to look at vespid wasps. He will be returning in late January with Dr Mauro Daccordi of the same institution, after a round-Australia trip.

With regard to Gordon Gross' position, it will be at least a year before a replacement is sought, and if the present economic climate continues, it could be much longer.

Department of Agriculture

Peter Allen left entomological research to take up a better paid job as a bureaucrat. The remaining State entomologists are now looking for a suitable telephone box from which to operate. Dennis Hopkins did the Sydney-Canberra- Melbourne circuit reviewing some Wheat Council projects, attending the Stored Products Workshop, Werribee, and dropped in on Burnley entomologists Mark Smith, Garry McDonald, Janet Horne, Bill Frost and Peter Ridland.

Greg Baker attended a course on identification of *Culicoides* at CSIRO Long Pocket Labs.

CSIRO Divisions of Soils and Entomology

Geoff Baker returned to duty whilst on leave in Europe to visit the CSIRO laboratories in Montpellier, France. In particular, he discussed future research on the biological control of white and conical snails with James Coupland, a new appointee on this project. James is a Canadian who recently completed his PhD on the ecology and control of black fly (Simuliidae) at the University of Aberdeen. Common parasites of the snails in Europe include sciomyzid, sarcophagid and calliphorid flies. Geoff and James met with Jean-Claude Vala (University of Avignon) and obtained useful information on the biology of local sciomyzids.

Ken Lee has now completed his term as Officer-in-Charge of the Adelaide laboratories. Robyn Grey-Gardner is on leave from Adelaide for a year whilst she gains training in the coaching of rowers at the Australian Institute of Sport in Canberra. Robyn is a former Olympic and Commonwealth Games medallist in rowing.

Department of Crop Protection (Entomology Group), Waite Institute

As of the 1st January, 1991, this is the new title of the Department, the "Entomology Group" being an informal description for everyone who used to be in the Entomology Department, the latter now having merged with Plant Pathology and the Weed Science groups under the chairmanship of Prof. Allen Kerr of "Australia Prize" fame. The Entomology Group is still teaching the same subjects, supervising the same students and is actively involved in entomological research. Departmental meetings are just three times larger (all in the name of efficiency!). The Department has been particularly successful with research grant applications for 1991, with Peter Miles, Andy Austin and Mike Keller receiving new ARC grants, Peter Miles being funded by the Wool Development and Research Council, and Mike Keller receiving funds from BSES (Bureau of Sugar Experimental Stations) to undertake a programme on the biological control of sugarcane mealybug.

Dr Ali Navvab-Gojrati from the Department of Plant Protection, Shiraz University, Iran, has arrived in the Department to work with Derek Maelzer for 9 months on the ecology of red scale. Dr Alex Arellano and Miss Janet Shorthose have finished their contracts in the Insect Pathology Laboratory and Alex has taken up a 3-year fellowship at Flinders Medical Centre. Dr Jane Drummond spent 4 weeks over December and January in the UK visiting the Rothamstead laboratories and the Institute of Biological Control at Silwood Park, and spent a short time in Bangkok at the Institute for Biological Control, Kasetfurt University.

Andy Austin returned on Christmas Eve after spending 3 weeks in the SW of WA collecting parasitic wasps and visiting the museum and Department of Agriculture. Scott Field has been awarded First-Class Honours for his work on the mating behaviour of *Cotesia rubecula* (Braconidae) and has been awarded equal first prize by the Australian Institute of Agricultural Science for the same work. Scott has taken up a position as Research Officer in Andy Austin's lab. examining the ovipositional mechanics of scelionid wasps. Neil Renfrey has been awarded the Browning Medal for his overall Distinction in Entomology for the final year of his BAgSc and is now working with Mike Keller as a technical assistant on the biological control of sugarcane mealybug.

Andrew AUSTIN
Regional Councillor

NEW SOUTH WALES

METROPOLITAN SYDNEY NEWS

Forestry Commission of New South Wales

The Forestry Commission of New South Wales has recently embarked upon a large multidisciplinary research project to investigate the effect of varying flooding regimes on the ecological balance of a River Red Gum forest in the Deniliquin District. The project is partially funded by the Natural Resources Management Strategy. It includes a study by Christine Stone to examine interactions between water stress and insect attack in mature and regenerating *E. camaldulensis*.

Deborah Kent is continuing her work on ambrosia beetles attacking standing, living *Eucalyptus spp.* and this year will commence a Masters of Science in Agriculture at the University of Sydney on this topic.

Sirex remains as a major concern within the Commission, particularly for the Bathurst Region. Biological control nematode levels in the emerging *Sirex* adults are currently being monitored for all Districts through the Commission's Bathurst and Tumut Research Centres. Preparations are underway for the 1991 inoculation programme with a major seminar/workshop covering all aspects of *Sirex* management planned for Autumn.

As part of the Scotch Broom biological control study Commission entomologists have completed a survey of the insect fauna of broom plants growing in the Braidwood area. Sampling took place in February, April and December, 1990.

Entomologists are working with the Extension Forester, Bathurst, to investigate insect attack and control methods in eucalypts in the Macquarie Woods arboretal plantings.

Alan York recently joined the Forest Ecology Section. He is commencing a research programme to investigate the impact of repeated prescribed burning on terrestrial invertebrate communities in coastal Blackbutt forest.

Macquarie University, School of Biological Sciences

Mark Westoby has just been granted one of Macquarie's first round of Personal Chairs. Great news and very well deserved!

Elaine Shuter and Lesley Hughes have both submitted their theses and are looking forward to news from the examiners not too far in the future. Lesley's plans are already concrete, however. She has a post-doctoral fellowship from the Australian Research Council and will be

investigating possible increased impact of pathogens and herbivores on vegetation following climate change.

Kate Mossop, who won the AES Student Prize in 1988, is back in Australia after a year working with science exhibitions in the UK, and hopes to find a similar job in Australia.

There is a greater than usual amount of thesis-writing - at least on arthropod topics - and several other people from our postgraduate list will be submitting their work within the new few months.

Chris Muller from Knox Grammar School did work experience with Dinah Hales in November. Chris is already well-known in the lycaenid world and looks forward to a career in entomology.

Life among the aphids will be a little quieter this year, as lack of ARC funding will prevent any major new work. But the University has come good with enough to keep the aphid mitochondrial DNA studies ticking over and we hope that applications for 1992 funding will be more successful.

Like just about everyone in the northern part of Sydney, Macquarie entomologists are trying to tidy up the damage caused to their gardens and houses by the January 21 "mini- hurricane". No doubt the termites will benefit from all the fallen timber.

Steve Handel will be visiting Macquarie for a couple of weeks in February to look at thynnid wasp pollination with Rod Peakall in the Blue Mountains, weather permitting.

Andrew Beattie and Duncan Veal were successful with a grant application of $72,000 from Ciba Geigy for research on antibiotics from bull ants.

Ian Oliver working with Rod Peakall has completed the first phase of an ecological genetics study of the antdispersed range plant *Sclerolaena diacantha*. Research so far indicates some evidence that ant activity affects population genetics of plants. Ian has been awarded a postgraduate fellowship to pursue a PhD.

Hall Cushman begins field experiments on ant-lycaenid interactions (he is a Macquarie University Research Fellow).

Andrew Beattie was twice interviewed by the BBC in London (radio) on his ant/antibiotic project and on insects as bioresources, during his recent visit to the UK and Africa. Andrew also commenced in January, 1991, preliminary studies of ant-acacia interactions in savanna of Zimbabwe.

Army Malaria Research Unit

During November Steve Frances, Tony Sweeney and Liz Brooks conducted a field trail at Cowley Beach North Queensland to study the effect of wearing insecticide impregnated military clothing as personal protection against scrub itch mites. They were assisted in this trial by Army volunteers from Townsville. Whilst in North Queensland they took time out to visit Dr Lee Owens at James Cook University and former work-mate Richard Piper, who has now gone bananas, at the DPI Field Station South Johnstone.

In November Bob Cooper visited CSIRO Division of Entomology Canberra for talks with Peter Atkinson and Bill Ballard on the possible use of PCR in identifying members of the *An. farauti* species complex. Bob also visited QIMR where in the capable hands of Tom Burkot and Leanne Cooper he was shown all facets of their newly developed DNA probes for *An. farauti s.l.*. It was quite satisfying to find that, in molecular biology at least, it's not only the mosquito that can do the probing.

Recent visitors to the unit included Dr Richard Montenari, WHO malariologist from PNG, Richard is interested in permethrin impregnated bed nets for trials in PNG and Dr George Milkovits from CSIRO Wildlife/Ecology Division, George was keen to know about possible vectors of myxomytosis.

Sydney University — Medical Entomology Unit at Westmead Hospital

In November Richard Russell visited the USA and presented two invited papers at the Society for Vector Biology conference in Phoenix, Arizona, and spent a few days at the laboratories of the Vector Borne Disease Division of the Centers for Disease Control at Fort Collins, Colorado, working with ticks and Lyme disease spirochaetes.

In December the Unit conducted a training course in mosquito biology, identification and control for health surveyors of State and local authority Departments of Health. Richard, Merilyn and John were involved with the course which was held in Leeton in the southwest of the State although participants from all regions and interstate attended for the four days.

Stephen has continued with his tick collections on the north and south coast and has been successful in isolating

some spirochaetal-like organisms into culture; we hope to be able to characterise these and assess them for pathogenicity in the near future. John Clancy and Peter Wells have now completed the final report of the 1989/90 Arbovirus Surveillance Programme for the NSW Health Department. With this report out of the way their attentions are now turned to processing the ever increasing numbers of mosquito collections from this year's catch.

George Milkovits from the CSIRO Division of Wildlife and Ecology in Canberra visited our unit to discuss the use of mosquito vectors with myxomytosis.

Australian Museum, Sydney

Geoff Holloway has been making slow but steady progress in his recovery.

There has been a lot of field work in the past few months. David McAlpine and Barry Day are in the Cairns district for a two-week collecting trip in northern Queensland. Gerry Cassis spent 3 weeks in the Border Ranges at the end of the year. Dan Bickel participated in a two-week ORSTOM expedition to Mt Panie in New Caledonia, and also collected in east Gippsland with Gunther Theischinger in January. Max Moulds is currently on one of his annual "megatrips", this time to Western Australia.

Visitors included: Andrew Calder (ANIC) on elaterid beetles, Alexander Kirejtshuk (Lenningrad) on nitidulid beetles, Pat Matyof (Seychelles) on Orthopteroids, Toshiaki Matsura (Kyoto, Japan, currently at University of New England) on ant lions, and Bob Pilgrim (Canterbury University, Christchurch) on fleas. Two workers from the Paris Museum on route to New Caledonia stopped in Sydney for a week and beside spending time at the Museum, also managed to collect locally, Thierry Bourgoin on fulgorids and Michel Baylac on gall midges.

BCRI, Department of Agriculture, Rydalmere

Garry Levot presented a paper on chemical control of northern mite infestations at the Stockfeed and Poultry Conference on 10 October in Broadbeach, and then later in the month, attended the 12th International Conference on Forensic Entomology where he gave a presentation entitled "Dead Men Do Tell Tales - the Application of Entomology to Forensic Science". On a more lively note, Alan Clift participated in the Joint Australian and New Zealand 17th National Mushroom Industry Conference held in Christchurch. Alan reported on currently funded research projects to the Australian Growers General Meeting as well as presenting a paper on the "Susceptibility of hybrid strains to pests and pesticides".

During November Eren Turak joined the staff at BCRI as a part-time assistant in the Taxonomy Section. Eren is a welcome addition to the section and will be working two days a week while he completes his MSc at Macquarie University. November saw Garry Levot setting off again this time to visit the Wallaceville Animal Research Laboratory at Upper Hutt in New Zealand to demonstrate bioassay techniques for the detection and description of pesticide resistance in sheep blowfly and sheep body lice; his visit is in response to the discovery of *Lucilia cuprina* causing flystrike in NZ sheep in 1989. Meanwhile back in Oz at the BCRI, Dr Thierry Bourgoin, Musee Nationale de Paris, visited Murray Fletcher to discuss fulgoroid morphology and taxonomy.

Dan BICKEL and Merilyn GEARY
Regional Councillors

NEW SOUTH WALES COUNTRY AREAS

Yanco Agricultural Institute

Ann Taylor recently commenced duties as an assistant in the Entomology section at Yanco. Ann was formerly with Cropwatch in Victoria and brings entomology personnel at Yanco up to 9.

David James combed western areas of Queensland in late November searching for parasitoids of spined citrus bugs. He also visited Jeffrey Aldrich, visiting Scientist from USDA, who is currently working at Nambour for 6 months on hemipteran pheromones. Jeff is working with David on development of a management strategy for spined citrus bug based on a long range attractant pheromone.

The seemingly annual fruit fly outbreak occurred just outside the MIA at Hillston just before Christmas. Unfortunately this was followed by the discovery of flies near Leeton in early January which ended the MIA's area freedom from fruit fly status for at least four months.

David James attended the Tri-state citrus field day at Loxton in South Australia in late November and presented a paper entitled "Spined citrus bug: Prospects for non-chemical management".

Agricultural Research Station, Narrabri

During November/December, Gary Fitt (CSIRO Entomology) spent several nights watching *Heliothis* moths during a visit of the CSIRO Radar Group from Canberra (Alistair Drake, Wayne Rochester and John Dowse). The visit coincided with emergence of a large population of *Heliothis* (about 1 million adults) from an 8 ha. chickpea crop. Nocturnal activities resume in late January when the Radar Group once again visits the north- west.

In November we also entertained a group of cotton growers from the Emerald/Biloela area who were in the south to learn of the latest research at Narrabri.

Gary has just returned from a summer field trip (mid-January) to inland NSW as part of the Inland Heliothis Project. Luckily the week was reasonably cool. Much of the area traversed between Bourke, Tibooburra and Broken Hill was extremely dry with no green vegetation and no evidence of recent *Heliothis* breeding, much as expected. However, *Heliothis punctigera* was present at an isolated cotton area south of Menindee Lakes.

Lewis Wilson reports that mites are a major problem in most of the cotton growing regions this season. The main problem is the lack of adequate control measures, as good miticides are in short supply. Many crops were abnormally highly infested with mites right from seedling emergence. Hot dry conditions and low predator populations, due to spraying for *Heliothis*, have favoured mite development. Some growers have been able to delay mite increase with dicofol (Kelthane) applied by ground. However this option is closing as the crop grows. Propargite (Comite) is extremely effective in cotton, even when aerially applied, but does not have full registration so supply is severely restricted to that approved by permit. As a result, growers will be forced to use the marginally efficacious organophosphates, entailing multiple applications and considerable cost. Current research is aimed at finding additional control measures, both chemical and non- chemical.

Last October, Neil Forrester was invited by the United Nations Industrial Development Organisation to deliver a paper at an International Seminar to mark the opening of new research laboratories at the Shenyang Research Institute of Chemical Industry, Peoples Republic of China.

Agricultural Research Centre, Tamworth

Royce Holtkamp is now the second entomologist at Tamworth having recently moved from Rydalmere swapping pests of lucerne for biological control of weeds. He joins John Hosking in this work which is increasingly becoming high profile in the agricultural and general community.

Robin Gunning is spending her weekends collecting insects for the Australian Entomological Society sponsored project "Invertebrate survey of Ben Halls Gap State Forest".

Ray Hall who retired as entomology assistant 12 months ago has returned as a casual assistant to help Robin with *Helicoverpa* resistance monitoring of Macquarie Valley cotton crops.

David JAMES
Regional Councillor

Overseas News

New Zealand

After settling down from 6 years of turmoil coping with redundancies in sciences; re-organisation of science areas; directives from central government to recover 30% of costs, science is again in the hands of politicians.

The new National Government intends to dismantle the scientific arms of organisations like the Forestry Department, Agriculture and DSIR and set up independent "Crown Research Institutes" or CRIs as they are to be known as. How this is to be accomplished is not yet clear, but at least they have done science the courtesy of setting up a task force comprised entirely of respected scientists to come up with a workable plan. Already the task force is interviewing scientists and getting their opinions. On the face of it, the idea seems good and should go a long way to protecting long term research especially.

The National Government has a stated commitment to science and we can only hope they will encourage scientists to remain in New Zealand after the exodus of the last few years.

How this new scheme will affect entomology is unclear; there will be certain core funding, but much of it will come from competitive bidding so we can only hope that the important agricultural and veterinary pests such as blowfly or grass grub and porina will get their fair share.

The 1991 Annual Conference of the Entomological

Society of New Zealand will be held at Waikato University from 12-15 May. Further information is obtainable from the Secretary of the Society: Ms Susan Millar, 8 Maymorn Rd, Te Marua, Upper Hutt. NZ.

John TENQUIST
New Zealand Correspondent

Papua New Guinea

Ray Msamdu resigned from DAI to join the Taro beetle project in Solomon Islands. Samson Laup was transfered from Saramandi to APD Headquarters in Kila Kila. The station at Saramandi has been closed down. Sim Sar has been transfered from Kuk to Bubia Agricultural Research Station. Fred Dori attended Richard Drew's Nov/Dec. 1990 fruit-fly course at DPI, Brisbane. Malchus Arura attended the biometrics workshop (1-4 Oct. 1990) at Coffee Research Institute, Aiyura and paid a flying visit to Brisbane from Dec. 19-22, 1990 to inspect the pest control procedures and facilities at Lower Burdekin Rice Products Co-operative Association.

Prof. Maev O'Collin visiting Forestry Research Institute drew attention to the presence of Golden Apple Snail, *Romacea canaliculata* at Lae. The snail is thought to have been brought into PNG by Filippino agricultural officers as an additional source of proteins in rural areas. The snail is a pest of rice seedlings in Taiwan, Japan and Philippines and was recently reported from Hong Kong. Kumar, Arura and Laup presented papers at the one day meeting (28th Nov. 1990) of the APD and called for the establishment of separate entomology and pathology units in the plant protection service. Laup also made a case for proper renumeration of scientific staff in the PNG civil service.

Ray KUMAR
Papua New Guinea Correspondent

News from Affiliated Societies

NSW Entomological Society Inc.

In November, Dr Hall Cushman spoke on "Uneasy relationships involving ants, homopterans and lycaenids". Hall is currently post-docing with Andrew Beattie at the School of Biological Sciences, Macquarie University. In his talk Hall described some of the research he had done during his PhD on ant/membracid interactions in Arizona and then outlined plans for his post-doctoral research project in which he hopes to study ant interaction with lycaenids or eurymelids.

The barbeque/collecting night at the NSW Forestry Commission establishment at Pennant Hills was a great success and was an excellent way to finish the Society's activities for 1990. It was a beautiful clear night and the function was well attended. Many thanks to the staff at Forestry for their efforts in organising the night!

John MacDONALD
Representative Councillor

Entomological Society of Victoria

Activities of the Society over the past few months have been as follows:

The June Annual General Meeting resulted in the election of two new Councillors: Mali Malipatil and Jenny Ross. Kelvyn Dunn has also offered his services as Editor of the Victorian Entomologist for which we are most grateful. Mark Hunting gave his Presidential address on the subject "Care of Collections".

In August Dr Richard Marchant from the survey Department of the Museum of Victoria spoke on stream sampling techniques for invertebrate biology of inland waters. An excursion was also held to view the David Holmes collection of worldwide butterflies and moths.

In October, Mr Peter Kelly presented an address on the Paropsines, together with excellent slides of adults and early stages. The membership of the Society has reached an all-time high of 100 members.

In December, we were saddened by the unexpected death of our honorary treasurer Gordon Burns. Gordon suffered a short illness through bacterial menengitis to the spine, and passed away on 12th December, 1990. Our sympathies are conveyed to his wife Joy and children Gary, Barbara and Colin. An obituary on Gordon's contribution to entomology appears separately in this issue of ***Myrmecia***.

Mark M. HUNTING
Representative Councillor

Entomological Society of Queensland

Our photograph shows members and families enjoying a break at the summit of Mt Gannon during the Society camp at Upper Tallebudgera in October.

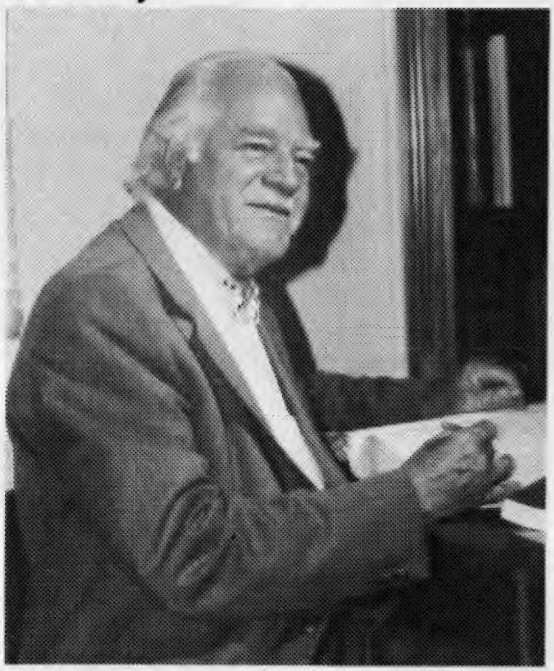
(L to R) K.Rungrojwanich, Glynn Maynard, Ian Cook, Sybil Monteith, Neil Monteith, Geoff Monteith, Doug Cook, Ken Harley and Wendy Forno.

The last social activity of the Society for 1990 was the annual Barbeque held in DPI Entomology Branch, Indooroopilly and attended by over 40 members and visitors. At the Notes and Exhibits meeting which followed, five exhibits or short addresses were given. Tracey Churchill spoke on the distribution and habits of the barychelid spider genus *Idioctis*; Joan Bryan and Pat Marks gave us an insight into history and 'behind the scenes' efforts that were used to produce the monograph "Culicidae of the Australasian Region"; Peter Mackey spoke on ecological succession in stream insects; Paul Forster provided a possible identification for pollinia attached to adult anopheline mosquitoes from northern Australia; and Judy Grimshaw gave us an insight into the delights and hazards of working in Papua New Guinea.

The next meeting of the Society will be the Annual General Meeting to be held at the University of Queensland on Monday, 11th March, 1991 at 7.30 pm in room 323 of the Hartley Teakle Building. Annual Reports for 1990 will be presented and the Council for 1991 elected. The main business will be the Presidential Address of the retiring President, Dr Wendy Forno.

Greg DANIELS
Representative Councillor

Obituary



David Joseph Lee
(28 January 1915–13 October 1990)

David Lee was born in Bondi on 28 January 1915. His father, Leslie Lee, worked in local government but was also a poet, writer and artist. The family - there was an older sister - moved to Ashfield, and David attended Fort Street Boys' High School from 1927 to 1931. His first published work appeared in "The Fortian" of November 1929: "The Government Savings Bank of New South Wales" by David J. Lee, 3B, the record of a school excursion to the newly-built bank headquarters in Martin Place. While formal and somewhat pedantic in style, the article suggests an already well- developed sense of history, an observant eye and a delight in detail; the schoolboy takes care to record that "the multiplying and dividing machine gives the answer to nine places of decimals". His 1930 "Fortian" prize for best contribution of verse to the magazine, and a pen sketch of cliffs near Bondi published the same year, show that he shared the interests of his father, of whom he was very proud. He was also an occasional member of the Dramatic

David Lee as a young man, probably taken at the opening of a biology field station associated with Sydney University. Caged insects and a macadamia plant specimen are visible.

and Debating Societies, and in his final year was elected a School Prefect.

Gaining only a modest pass in the 1931 Leaving Certificate, he entered Science at Sydney University intending to become a geologist, an interest perhaps awakened by an uncle who took him bushwalking in the Burragorang Valley. One of the courses available in Science at that time was Economic Entomology, given by Anthony Reeve Woodhill. Woodhill had, in 1930, initiated a programme of mosquito research at the University. David developed a great admiration and affection for Woodhill and, under this influence, transferred his interest to entomology, and more particularly, Australian mosquitoes. He graduated BSc in 1936 and went to CSIR in Canberra where he carried out a mosquito survey of the Molonglo Gorge, a project not wholly favoured by his employers. After a year he left CSIR and went to the Queensland Department of Agriculture and Stock's Cotton Experiment Station at Biloela.

Following the outbreak of World War II he returned to Sydney and became a member of one of Alfred Conlon's wartime research units. Conlon, a fellow Old Fortian, was appointed in 1940 the first University Manpower Officer and subsequently head of the Army's Research Directorate. For his units Conlon "acquired a corner in Australia's young, non-combatant and often rather radial intelligentsia". The opening of the Pacific Campaign in 1942 greatly stimulated mosquito taxonomy, and working at Sydney University's Department of Zoology David wrote and illustrated "An atlas of the mosquito larvae of the Australasian region. Tribes

Australian Entomological Society Membership List

January 1991

* Foundation Members
\# Honorary Members

Megarhinini and Culicini" (1944) and, with Woodhill, "The Anopheline mosquitoes of the Australasian region" (1944) for use by the Australian Military Forces. He also gave service training courses in mosquito identification and control.

After the War David remained in the Department of Zoology, in 1947 making his first, and only, overseas trip, to southern Papua where he collected biting flies. In 1948 he succeeded Frank Taylor, with whom he had worked on mosquito taxonomy, as head of Medical Entomology at the School of Public Health and Tropical Medicine at Sydney University. He remained in this position until his retirement in 1980, being awarded an Associate Professorship in 1967. During his 32 years as head of Medical Entomology the section initiated or collaborated in such diverse research programmes as mosquito and biting midge taxonomy, insect quarantine, domestic fly and flea problems, institutional scabies, biological control of mosquitoes, and vector-borne diseases, particularly Murray Valley (now Australian) encephalitis, dengue fever, Ross River virus, myxomatosis and fowl pox. It also introduced two generations of medical graduates, health inspectors and military personnel to the mysteries of insect identification and insect-borne disease.

One of David's greatest contributions to medical entomology, apart from his taxonomic work, was his production of "compendiums" of available information on selected topics — what would now be called data bases. He saw these as a means of giving researchers ready access to earlier work in their field, and of disseminating information in a readable and interesting manner to non-specialists. The most notable of these publications is the 12-volume "Culicidae of the Australasian Region". The conception and prolonged gestation of this massive project were described by David in his Introduction to Volume 1 of the series (1980). At that time he expressed the hope that all volumes would be published within two years, but problems of staffing and funding greatly prolonged this period. Despite open heart surgery in 1980 followed by intermittent bouts of poor health he continued to collaborate on the series, checking and rewriting. At times he must have feared he would not see its completion, and the publication of the final volume in 1989 was a moment of great satisfaction to him.

To the younger entomologists on his staff, Professor David Lee could appear rather daunting - a distinguished-looking man despite the slightly baggy trousers tightly belted below the waist, one of his seemingly infinite stock of bow-ties clipped at his throat. He claimed the bow-tie was a practical necessity for a male entomologist, as an ordinary tie constantly became entangled with the insect specimens on the workbench. He had the disconcerting habit - even more disconcerting on the telephone - of punctuating his conversation with long silences, during which he carefully ordered his thoughts for his next statement. Mistaking these silences for awkward lulls in the conversation, the inexperienced junior entomologist would leap in with a random observation designed merely to fill the vacuum. The error of this became apparent only when, acknowledging the gambit with a withering stare, David resumed his original line of conversation as though nothing had intervened. Equally disconcerting was his staff management technique. Independent himself, he like to give members of his section as much freedom as possible to follow their research interests and to learn by their mistakes. When their apparent perversity finally exhausted his patience - and he was a man of great patience - he preferred to use indirect influence, in the form of oblique comments and subtle hints. His staff, lacking his great subtlety, often failed to discern his meaning or indeed to become aware that there was a meaning to be discerned. On such occasions the atmosphere would become frosty. But these occasions were rare. David was enormously loyal to, and supportive of, his staff, treating them almost as family members, taking a fond interest in their outside activities and their home life. His staff in return regarded him with great affection. He was generous, humorous, always gentle and courteous, a great retailer of anecdotes, drawing on his prodigious memory in which were stored those countless miscellaneous scraps of information he had acquired because he felt sure they would be of use some day. Personalities and events of forty and fifty years ago were as immediate to him as those of the day before yesterday. He found the politics of Australian entomology as fascinating as good theatre, both as an observer and, occasionally, if need be, as a participant. He enjoyed good food, good wine (and good whisky), particularly if the company was congenial, and especially if the company was female. He loved books, finding particular delight in obscure volumes purchased for a few cents in second-hand bookstores. He liked writing, and was very conscious of style and grammar. Some of his best writing - on the vagaries of the distribution of *Aedes aegypti* in Australia, or the history

of the School of Public Health and Tropical Medicine he produced for its 50th anniversary volume - suggests that, had he not become an entomologist, he might have fulfilled the promise of his schoolboy essay and become a distinguished historian. His greatest relaxation was oil painting. Over the years he attempted many styles and subjects, but in his retirement achieved his best work with scenes of his beloved bushland, near his home at Galston.

He gave time and support to various scientific societies and associations. In 1934/35 he was one of the Vice-Presidents of the newly-formed Sydney University Science Association. In 1936 he joined the Linnean Society of New South Wales, becoming a Member of Council in 1949, and President in 1950. he was a member of both the Australian and Queensland Entomological Societies.

At meetings of the Science Association and the Linnean Society he became acquainted with Alma Melvaine, a botanist. They were married on 13 November 1942, and had two sons, Alister and Jim. Following his divorce from Alma in 1976 David married Betty Willis (nee Schuch), and the expansion of his girth to more impressive proportions since this event could be attributed to his fondness for Betty's wonderful cooking. By this marriage he acquired four stepchildren, and in recent years he became a grandfather and stepgrandfather several times over.

Betty and David moved to Brisbane towards mid-1990, and he was delighted to renew acquaintanceships with old friends there, such as Pat Marks and Eric Reye. Tragically on October 13 his implanted heart valve, which he knew had an unpredictable life span, failed, and he died at the age of 75. With his death Australian entomology lost an irreplaceable character. He was one of the old-style generalists, with a broad and deep knowledge of the whole field of medical entomology in Australia, and with a wealth of experience on which to draw. His greatest professional achievement, the superb "Culicidae of the Australasian Region", which he nurtured for forty years and which he alone could have brought to fruition, will remain as a monument to his work and to his memory. We owe him a debt of gratitude.

Margaret DEBENHAM
Sydney

Obituary

Gordon Gibson Burns
(28 March 1920–12 December 1990)

Gordon Gibson Burns was born as Essendon Victoria on 28 March 1920. He was compelled to leave Technical school at an early age along with many other young people during the depression years, in an effort to help support his family. He was able to obtain a trade in upholstery work, but upon the commencement of the second World War, Gordon enlisted in the Australian Infantry Forces and served his country at a Battalion Signaller in the Sixth Division. For a few years, commencing in 1942, he fought along the

infamous Kokoda Trail in Papua New Guinea. After the War, during May 1947, Gordon volunteered for the British Occupational Forces in Japan, and was promoted to Sergeant. After some eight years service in Japan, Gordon was returned to Australia and later discharged in Melbourne.

This period in Japan enabled Gordon, who was at that time an avid collector of birds eggs, to build up a substantial collection of the Japanese species. One of his favourite haunts was Mount Fuji, where he spent many hours hunting the prized species. Gordon also began to exchange internationally and amalgamated a fine collection of world wader eggs. Legislation was introduced prohibiting the preservation of birds eggs as a hobby, so Gordon placed his scientifically valuable collection with the CSIRO in Canberra.

Gordon married Joy soon after his return from Japan and re-commenced his upholstery trade, later venturing into business at Dunolly, Victoria, where they ran a Newsagency- cum-General Store, before purchasing a milk bar at Mornington which Joy operated, as well as caring for their three children. Gordon subsequently obtained employment with the Safeway Supermarket chain, later becoming an assistant Manager.

Without his collection of bird eggs, Gordon began to take an active interest in the local insects, firstly the more conspicuous forms caught his attention, such as the butterflies, but later he began to investigate the Coleoptera as well. It was about this time that Gordon's employer, on hearing of his interest in insects, arranged for Gordon to meet the locally renowned Lepidoptersit, David Holmes, who lived nearby at Red Hill. He met David Holmes in about 1963-64 and David, after showing his collection, successfully stimulated, in Gordon, an intense zeal for insect collecting. In the mid 1960's, Gordon joined the Entomological Society of Victoria. He soon dispensed entirely with the butterflies, and during much of his spare time, began to systematically hunt out the local Jewel beetles (Buprestidae).

A change in occupation allowed Gordon far more time to work on his prized beetle collection. He took on a local milk run during the early morning hours, but ill health delivered Gordon up for open-heart surgery and after successful recovery from this operation, he was forced to take on lighter work until his retirement at the age of 60.

Retirement was like a new life for Gordon Burns and he now had almost unlimited time to devote to entomology, ornithology and woodwork. Being a skilled craftsman, Gordon designed and constructed his own insect cabinets to store his treasures. To increase the number of Buprestid species in his collection, Gordon and Joy began extended survey work into the remote arid areas of Australia in search of the rare and poorly known taxa.

Unable to remain content with merely collating a complete collection, Gordon's active mind enquired into the taxonomic literature, and be began to publish his own work in the *Victorian Entomologist*, the Journal/News Bulletin of the Entomological Society. In addition to his 12 articles in the Society's publication, Gordon was an active Council member and took on the position of Vice President for a period, and for almost eight years served as the Honorary Treasurer.

In the final years of his life, Gordon undertook a short course in computer programming and subsequently commenced a computer database on the Victorian buprestid beetles, in association with the project ENTRECS established by the Entomological Society of Victoria. As part of this venture, much of Gordon and Joy's time was spent together examining the historic collections at the Museum of Victoria, correcting determinations, and doing considerable voluntary work on the collection, resulting in the Buprestid collection being presently one of the best curated collections at the Museum. In addition, he provided volunteer work on the Buprestid beetles at the VAIAC at the Institute of Plant Sciences, Burnley during 1990.

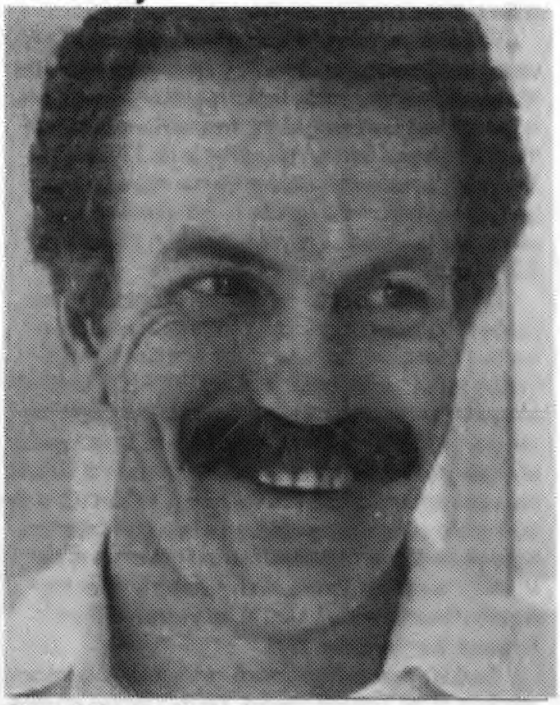
Gordon's final and monumental work was his taxonomic check-list of the Victorian species, the final version of which he examined not long before his death. This check-list, includes distribution maps, and will soon be published through the Museum of Victoria. Gordon died on 12 December, 1990, and it is indeed sad that he did not live to enjoy receiving the first copy of his years of endeavour. This check-list, with an illustration of *Castiarina gordonburnsi* (Barker) glorifying the cover will serve as a testimonial to amateur entomology in Victoria, especially since it was produced by one of the great amateurs with no formal scientific training.

Gordon Burns is survived by his wife, Joy, his three children: Gary , Colin, and Barbara, and their grandchildren.

Eponymy:
Synechocera burnsi Bellamy, 1987
Dinocephalia burnsi Bellamy, 1988
Castiarina burnsi (Barker), 1986
Castiarina gordonburnsi (Barker), 1987

Kelvyn DUNN
Institute of Plant Sciences
DARA, Burnley, Victoria 3121.

Obituary



Richard Clarence Kassulke
(19 January 1941–22 January 1991)

It is with great sadness that we record the death of Richard Kassulke on 22 January 1991 after a long and debilitating illness. Richard joined the CSIRO Division of Entomology in December 1964 and worked continuously in the Division's programs on biological control of weeds until March 1990. Richard was stationed in Brisbane where he worked on Noogoora Burr, *Lantana*, several aquatic weeds, and on *Mimosa*, *Sida* and *Hyptis*. Richard was one of the research team responsible for biological control of the floating aquatic weed salvinia. The team's work was recognised by award of the UNESCO Science Prize in 1985; an AIDAB Bicentennial Award For Excellence in Overseas Development Assistance in 1988; Honourable Mention in the Rolex Awards for Enterprise in 1990; and a film on biological control of salvinia in Papua New Guinea, entitled "Assault on the Sepik", was awarded Best Didactic Values at the International Festival of Science Films, Barcelona, 1985.

Richard participated in the release and subsequent field assessment of a number of biological control agents and, for many years, he managed the quarantine facility at the Long Pocket Laboratories. As manager of the quarantine facility he studied the biology and host-specificity of a number of candidate biological control agents and was co-author in 20 scientific publications. In recent years he participated in exploratory surveys in Mexico for control agents for *Mimosa*, *Sida*, and *Hyptis*. Richard greatly enjoyed travel, and his involvement in exploratory activities catered to this interest as well as his intense interest in finding and evaluating insects for biological control of weeds.

Richard joined the Australian Entomological Society in January 1974 and served as Assistant Business Manager from 1975 to 1979.

Richard is sadly missed by his colleagues and friends in the Division of Entomology and at Long Pocket Laboratories.

Ken HARLEY
Indooroopilly

Biographical Note

Three Generations of Entomological Interest in the Franzen Family

Ludvig Franzen was my grandfather. He was born in Soderkoping, Sweden on 14 December 1879 and he died at Brisbane on 8 June 1945.

He left Sweden when he was about 20 years of age and emigrated to Australia. In Brisbane he met and married Louise Schipper a short time later. They left Brisbane and moved to Killarney south west of Brisbane where he worked in the Butter Factory. They later moved to Chinchilla west of Brisbane, where they operated a general store for a few years. It was at Chinchilla where Clarence, my father, the second youngest of five children was born on 5 September, 1909.

The family later returned to Brisbane and Ludwig set up a business as a fruit and vegetable merchant under the name of L. Franzen & Sons.

Ludvig Franzen was apparently interested in entomology from an early age. His insect collection included butterflies, moths, lace wings (antlions-Neuroptera), jewel beetles (Buprestidae) and frog hoppers (Hemiptera-Cercopidae). Many of the butterflies and jewel beetles of

Ludvig Franzen
(14 December 1879 - 8 June 1945

both my grandfather and my father are now in my collection.

Ludvig was a member of the Queensland Naturalists' Club for many years and published a number of articles in the *Queensland Naturalist* on his collecting activities.

I have little recollection of my grandfather as he died when I was very young. However my father, who died in 1984, had related to me a number of stores of Ludvig and his passion for entomology. He obviously travelled to many States of Australia as his butterfly collection includes specimens he collected in Western Australia, Tasmania, Victoria, New South Wales and North Queensland as well as from localities in south east Queensland. No doubt many of his trips to north Queensland were on business, calling on fruit growers along the coast.

As suggested in ***Myrmecia*** Vol. 26 Part 2, May 1990 page 91, it seems likely that Ludvig came across Edmond Jones, a citrus grower and fellow butterfly collector of Rockhampton on one of those trips. There are also specimens in the collection labelled E.P. Jones in 1923. These no doubt appear there as a result of that association.

There are many butterflies and jewel beetles collected by L. Franzen at Burleigh Heads and other locations on the Gold Coast. The family frequently travelled to the Gold Coast by train for holidays and picnics. Ludvig also used to call on a collector at Southport. Another popular collecting area for my grandfather was North Stradbroke Island and Moreton Island, both near Brisbane in Moreton Bay. There are many specimens in the collection taken in the 1920's from these islands. Articles by L. Franzen are also contained in the Queensland Naturalist detailing butterflies collected on excursions to both islands in the 1920's.

There are many specimens in the collection, particularly butterflies and jewel beetles, with identification labels ascribed to Ludvig's contemporaries. In the jewel beetle

Clarence Rudolph Theodore Franzen
(5 September 1908–15 January 1984)

collection, these include such collectors as W. DeBoulay, H.J. Carter, R. Illidge, H.W. Brown and J. Macqueen, while in the butterflies there are specimens collected by G.A. Waterhouse, F.P. Dodd, E.P. Jones, H. Elgner, J. Macqueen, F.M. Angel, J. Buzacott and others.

Although the antlion collection is now with the Queensland Museum it is clear that Ludvig took a particular interest in that order. His work on these insects was praised in an article by P. Esben-Petersen, Silkeborg, in the *Queensland Naturalist* Vol. VII, No. 2, pp. 31-35, July 1929. In the article he notes that he found amongst a lot of very interesting material of Australian Neuroptera collected by L. Franzen, some new and undescribed genera and species. In fact he there described two new genera and two new species from the collection.

One of the new genera noted by Esben-Petersen, he named *Franzenia irrorata* after L. Franzen and he commented "I take the liberty to name this interesting genus in honour of Mr L. Franzen, who has done so much in exploring the Neuropterous fauna of Australia".

My father, Clarence Franzen, also a collector, took over his father's insect collection on his death. My father's interests were primarily butterflies, hawk moths and jewel beetles. Most of his collecting was done in south east Queensland although he did make some trips to north Queensland and occasionally into New South Wales.

I recall as a lad, many evenings in the fading light, spent at our front lantana hedge with dad catching hawk-moths which came to feed on the blossoms. I also spent much time with my father in the bush on collecting trips pulling bark from eucalyptus trees carrying mistletoe, looking for *Ogyris* pupae (Family Lycaenidae). No doubt this early training fostered an interest for me in collecting butterflies, moths and jewel beetles. My collection was combined with that of my father and grandfather when my father died in 1984. I still enjoy collecting and add to the collection as and when I can.

Don FRANZEN
Ferny Grove, Brisbane

PROPOSED AGM WORKSHOP ON A SPECIAL PUBLICATION CONCERNING FUNDING OF NATIVE INVERTEBRATE WILDLIFE INVENTORY

At the Systematics Symposium of the 1990 AGM in Canberra I saw my colleagues meekly accepting an agenda set by ABRS and ranking themselves as to whose taxon most deserved funding from the $360,000 allocation. I was reminded of Muscovites in a queue outside a sparsely stocked shop hoping that their turn would come before winter.

As a member of the conservation committee I find myself rehashing the same tired old set of sparse data repeatedly for this or that environmental impact study or commission of inquiry. I know others have the same problem. Rarely do such studies provide realistic or equitable funding to provide new data on what is the dominant component of native wildlife in contrast with that available for site archaeology, history, botany and vertebrates.

On an ABC Science Show in 1990 Roger Kitching suggested that Australia's total science budget for 100 years would not provide an inventory of our continental insect fauna. Certainly current taxonomy funding will not get there in 100 years. For example at the Canberra AGM workshop on Hemiptera there were 18 taxonomists. Their combined effort would probably not equal 5 full time paid taxonomists. Many receive no funding and work part time or out of hours. To revise the estimated 5500 species of Hemiptera in 40 years each of 5 full time taxonomists would need to describe or revise 1 species per working day.

Nevertheless I think a respectable and very useful first pass inventory or our insect fauna could be achieved in 30 years. If the rainforest element is excluded or studied in part I am sure this goal could be achieved. It would require a revision of priorities within the national budget for national heritage and environmental items.

Although I agree that habitat based conservation decisions have a large role to play in invertebrate conservation I think that ABRS talk about 'goal directed projects' and 'filling critical gaps' is not so much rational planning as an admission that grossly inadequate funding is going to the perishable invertebrate item within the list of national heritage items. Roger Kitching's talk of 100 years national science budget merely encourages policy makers in national heritage agencies to continue to write off invertebrate

inventory as too hard. There is an unfortunate positive feedback in conservation agencies between the unfamiliarity of 98% of the staff and 100% of the policy makers with invertebrates and the common statement that the public and politicians are only interested in funding the conservation of cuddly or conspicuous animals. Rather than encourage this loop we should arm the policy makers and wildlife managers with a concise document arguing for:

1. More equity for invertebrates within the total national heritage budget with examples of current inequities. Examples might be expenditure on the National and State art galleries; archaeology; history; historic hardware; vertebrates. ANPWS recently called for 7 tenders to review the conservation status of **major taxa** of indigenous wildlife. Five were for vertebrates, 1 for nonvascular plants and 1 for non marine invertebrates. At least marine invertebrates didn't get a second bite at the cherry because they will get millions of dollars through the Pulp and Paper Research Program.

2. The possibility of achieving a useful first pass continental invertebrate inventory in 30 years. This would include calculation of the workrate of an average full time paid taxonomist (if we have any) and the availability of taxonomists should funding be made available. Similar calculations of field survey requirements would be necessary. The alternative is to produce a Reader's Digest condensed version of what is left in 100 years.

3. Staffing of all major land management or conservation agencies with at least 1 insect taxonomist and 1 invertebrate ecologist. This could be done within existing budgets by replacing specialists in other areas that are comparatively overserviced.

At the 1991 AGM in Melbourne I would like to see a workshop aimed at collating the information and arguments that would form the basis of an AES special publication. This publication would save us having to individually recite the same sad story when approached to provide (usually for no pay) a checklist, provide determinations or conservation comment for innumerable sites or specimens. More importantly it would provide sympathetic policy makers with a concise well illustrated argument concerning our current share of the 'national heritage' budget and what we need to get a continental inventory completed in 30 years say. I am sure many members have facts and figures relevant to such a project. If you would like to see such a project initiated at the next AGM please contact me on 004 240236 or at Department of Primary Industry, PO Box 303, Devonport 7310, Tasmania.

Lionel HILL
Devonport

NEWS FROM THE CONSERVATION COMMITTEE

After the busy last quarter with the South-east Forests Inquiry, this quarter has been relatively quiet. We have been preparing a short submission on coastal environments for the House of Representatives Standing Committee on Environments, Recreation and the Arts, which we will later expand for the next Resource Assessment Commission's Inquiry on the same topic. A number of people have helped us with this and we are most grateful to them. There is time however for anyone who would like to contribute to do so for inclusion in the RAC submission. We also sent off a short submission to RAC's Forest and Timber resources inquiry to complement our SE forests report which they also received. In September, Alan Andersen, our Northern Territory member, gave a verbal submission for us to the RAC Kakadu Inquiry.

We have had replies to our letters to Tasmania concerning the World Heritage Area and Macquarie Island management plans. As far as the WHA plan was concerned, 603 submissions were received altogether by the Tasmanian government which is a very large number. One item on which we made some comment was the use by apiarists of the area which is becoming an issue of increasing controversy mainly because results of research on the effect of honey bees on native flora and fauna is somewhat contradictory.

A Japanese television company producing a programme documenting world opinion on environmental concerns to be called "Our Beautiful Planet" sent the Society a questionnaire forwarded to us by the Executive. Committee members responses expressed concern for habitat destruction and need for more funds for education and research particularly in developing countries.

The first number of the Endangered Species National Network Bulletin was issued in November by the World Wildlife Australia office in Sydney. This publication is funded by the Federal government. Our invited article on

invertebrate conservation was included and it is clear from comments I have received, that it is reaching a wide range of people interested in conservation. Barbara York Main has prepared an article on conservation of mygalomorph spiders in WA for the next issue and we have a third practically complete on ant diversity with others in the pipeline. I think this is well worth while and since it takes only a short time to prepare an article of about 700 words, I am hoping we can continue to contribute to every issue. If any members of the society would like to submit an article we would welcome it. Please send to me or any other member of the committee listed on the back cover.

Finally, we managed to obtain considerable media coverage in November because of an item in "The Australian" with the rather inaccurate headline "Smugglers threaten rare insects" with a photograph of myself squinting at a *Phalacrognathus muelleri*. One comment was that it was difficult to tell which was which! It resulted in seven interviews on talkback radio and one in television news which allowed me to discuss insect conservation in general.

Penelope GREENSLADE
(Convenor, Conservation Committee
Australian Entomological Society)

REPORT ON MEETING ON AGROECOLOGY AND BIODIVERSITY IN TROPICAL AND TEMPERATE REGIONS IN PADUA, September 25-29th 1990

Now that the layman has found a word which will enable him to at least talk about the complexity of life in the world we live in and so it is less threatening, there has been a positive scramble to take advantage of this advance. I speak of course of the term "biodiversity". We were already becoming a trifle jaded with it when the explosion of meetings began last year. I can, naturally only talk about those I am aware of, and no doubt the actual number is several times the six listed here.

First was a meeting in Bergen, Norway in May entitled: "Our common heritage: protection of biodiversity in the developed world", organised by the Centre of Environment and Resource studies at the Museum. Here there were sessions on biodiversity relating to genetic variability, introductions, freshwater and marine habitats, climate change, terrestrial biota (Usher *et al.*) and systematics (Vane Wright *et al.*).

The next I must confess was a workshop at the Ent Soc AGM in Canberra in early July entitled "Are Australian rainforests diverse?". As organiser, I can aver that the object was not to grab attention but to produce a consensus protocol for terrestrial invertebrate survey work and some progress has been made to that effect.

Thirdly, later in July, a much grander international event took place organised by CAB (Commonwealth Agricultural Bureau) at the Royal Society of London, with numerous sponsors including the Australian government agency, AIDAB. Here the title varied slightly being 'A workshop on the ecological foundations of sustainable agriculture: importance of biodiversity among invertebrates and microorganisms'. About 120 were at this workshop including a fairly large contingent from south East Asia as well as the expected UK group and a small number from Australia, but the latter were exclusively administrators and not those actually working in the field. Of interest to this Society were papers by Nigel Stork and Jeremy Holloway on "The dimensions of biodiversity: the use of invertebrates as indicators of man's impact", Lawrence Mound and Professor D. Hawksworth on "Biodiversity databanks: the crucial significance of collections" and Ken Lee on "The diversity of soil organisms". Unfortunately the latter restricted his subject matter to earthworms so did not get to grips with the actual topic in hand. A further paper by Professor Lal, a physicist, suggested that the presence of termites reduces diversity through their feeding activities causing loss of vegetation cover. Although this may happen under particularly severe conditions of drought, on the only occasion where it was documented in Australia by Tony Watson previous damage to the original cover of mulga by fire, cutting and stock was the initial cause. The reasoning involved assuming termites consume all grass down to the roots so that soil erosion was the result. The term biodiversity occurred in 13 paper titles out of 15 and after reading the abstracts I'm afraid I was left with a feeling that again we knew most of it already.

Fourthly late in August and again in Canberra, in an attempt to catch the attention of the media and hence politicians, we had an evening of talks on "Biodiversity and Systematics" which was loosely tied to the international meeting of the Willi Hennig Society. Discourses by Peter Raven and Joel Cracroft were well delivered but being

mainly aimed at a lay audience told us nothing new. Of greater interest was Chris Humphries and Dick Vane Wright's method of assessing the conservation value of sites using the phylogenetic relationships of the taxa present (critical area analysis). Although it has yet to be tested and there are some obvious difficulties, it does offer a new and perhaps more useful approach for invertebrates than any others on offer at present.

Fifthly another truly international meeting in Padua, Italy which I attended, with the title of "Agroecology and conservation issues in temperate and tropical regions". The amount of information offered here was enormous with over forty countries represented including a large number in South America and Africa and of course from all European countries and North America, altogether 189 contributions. With very few participants from the UK, south east Asia and Australia it seems that there was curiously no overlap with the earlier London meeting. Most of the papers provided somewhat depressing evidence of the enormously rapid decay in the world's ecosystems which has accelerated especially during the last ten years and the dedicated but small scale and hence somewhat ineffective attempts to reduce the rate and restore the land. What was horrifying was the fact that the degradation is occurring so fast and in so many different countries. Efforts being made to halt the decline seem paltry in comparison to the problem and doomed to failure. There was an emphasis on soil biota at this conference and also a series of contributions measuring and documenting diversity in such places as Tanzania, Brazil, Thailand and even Australia. This last was a poster by Yves Bassett, well known to the members of the Society for his gymnastic approach to field work. Yves divided catches of insects from the forest canopy into size categories and compared his results with those from similar studies in other forests. My paper was a much more general one about conservation in agricultural and forest systems in Australia using, of course, the Collembola as an example of a group affected.

The final one I will discuss here was another in Australia in early October. This was a workshop on "The utilisation of renewable Biological resources" and I was asked to contribute to a section organised by Andrew Beattie on "Research priorities in the conservation and management of Australian Biodiversity". The report I have from this workshop is that the term biodiversity is to be abandoned as "no one knows what it is" in favour of "ecological complexity". It is said that the latter term is more comprehensible. A curious decision considering the current worldwide obsession with the word biodiversity! No doubt this concept was put forward and supported by those who do not have to daily deal with large numbers of small unnamed creatures of unknown affinity and life style.

Arguably the most important meeting in Australia which included discussion on biodiversity was that of the IUCN in Perth in December reported elsewhere in "Myrmecia".

Naturally 'Resolutions' emerged from some of these meetings; In London, two pages were drafted and from Padua we had a single resolution but it was virtually identical to one of those from the London meeting and to several from meetings in Australia last year. In formal terms it was drafted thus by Keith Kevan:

"Whereas public awareness of the importance of biodiversity in the earth's natural resources is increasing and this diversity is decreasing at an alarming rate both locally and totally as a result of degradation, and it is imperative that knowledge of the world's flora and fauna be improved, it be resolved to urge all governments and private agencies at all levels and in all countries to make available resources for taxonomic research including positions for trained taxonomists and collections in an attempt to reverse the trend in these resources (that is the biotic diversity of our planet), which are essential to our survival".

For my part I am not convinced that more taxonomists will necessarily save the world. Surely we have enough information about diversity or at least the potential diversity of ecosystems, their fragility, the difficulties of restorative measures and the hundreds of years that some habitats take to develop, to be convinced already that maximum protection is necessary. Will more names really make any difference? This is not to deny the great importance of knowing what species we have and where they are or for more invertebrate taxonomic input into environmental monitoring. We urgently need more taxonomists to do this for us, but that is a separate issue. Too many times these two become confused, probably to the detriment of both. Perhaps it is relevant here to say that after talking to biologists from many countries over the past few weeks on conservation and related issues, it seems it is always the political problems that end up being discussed rather than

the lack of scientific data. The message from this is perhaps that we know biodiversity is a 'good thing', lets put more effort into actively protecting it rather than talking about it.

Oh, by the way, don't forget to apply now to attend the meeting in Columbus Ohio next March on "Agriculture and the Environment", one in Hobart in the same month on a sustainable ecology for Tasmania and John Lawton will be talking to the Royal Entomological Society in London also in March, on "Understanding insect diversity: the ecological framework". There is also of course the biodiversity session at the Entomological Congress in Beijing next year. Quite an exercise for your travel agent!

Penelope GREENSLADE
Canberra

SECOND INTERNATIONAL CONGRESS OF DIPTEROLOGY

Bratislava, Czechoslovakia — August 26–September 1 1990

The 2nd Dipterology Congress attracted 300 participants to Bratislava in southeastern Czechoslovakia from 33 different countries, including 5 from Australia — Daniel Bickel & David McAlpine from the Australia Museum, Don Colless from Canberra presenting a poster on his new family of "Axe flies" and David Hancock and myself from Brisbane.

The Congress was organised into 16 morning sections, 23 afternoon workshops and 70 poster displays. Most sections met on a single occasion with "Biosystematics of Brachycera" and "Morphology & Ultrastructure" meeting twice and the largest section "Ecology and Population Dynamics" 3 times. Most sessions were held in the Faculty of Natural Sciences of Comenius University, a series of interlocking buildings in which it was easy to get lost, with the Ecology section in the somewhat remote Friendship Hall of Residence. Chairmen strictly adhered to time which encouraged movement between sections.

The opening plenary session was addressed by D.M. Wood on "Phylogenetic implications of male genitalia of Diptera", N.P. Kirvosheina on "Larval morphology and the higher classification of Diptera" read by her daughter, Marina, and M. Vogel "Importance of Diptera in nature conservation". Individual views on the rest of the congress are dependent on the choice of parallel sessions. Sections began with review papers of high standard and I was impressed by those of J.R. Wood on "Genetics of Diptera"; Dan Kline on "The use of semiochemicals in surveillance and control of pest species"; J.R. Anderson "The impact of recent technologies on research associated with blood feeding by flies" and M. Trpis "Vectorial capacity of vectors of disease".

A former colleague, Anthony Downes, had the challenging experience of giving three lectures in the absence of lecture notes, slides and a change of clothing, when the airline lost his luggage between Canada and Prague. It arrived towards the end of the congress when he had already delivered the lectures in his inimitable precise style, a credit to his command of the subject matter. Two were on "Evolution by transfer of sexually dimorphic characters in Ceratopogonidae" and "Behavioural characters and their diversification in the phylogeny of Diptera: mating in flight".

I was delighted to renew acquaintance with V.M. Glukhova of Leningrad, whose book on "Bloodsucking midges of the genera *Culicoides* and *Forcipomyia* I reviewed recently (*J. Aust. Ent. Soc.* 29: 160) but sorry that Professors M. Kremer of Strassbourg and A.M. Dubitskii of the USSR were unable to attend. It was a pleasure to hear and meet with Ralph Barr and Curtis Sabrosky, both well known to many Australian entomologists. Ralph spoke on "The introduction of malaria into S. California from Mexico" and Curtis on the goal of producing a "World catalogue of Diptera".

The next Congress is to be held in Guelph, Ontario, Canada in 1994(?). Unfortunately this will reduce the number of participants from Eastern Europe who were able to attend the Bratislava meeting.

In view of the changes taking place in Eastern Europe some impressions of life in Czechoslovakia may be permitted. In common with other areas of the world ethnic confrontation exists between Czechs and Slovaks. The Congress was held under the aegis of the Slovak Academy of Science in the Slovak capital, Bratislava. It was easier for the local office of the State Travel Agency, Cedok, to make arrangements in Austria than in the Czech capital Prague. This did not help the travel arrangements of some attending the Congress.

The old order has collapsed but there is uncertainty about what constitutes democracy. Educated English-speaking young people complained that the older ones

could not remember how a democracy was run and they, the young, had always been told what to do. They were concerned as to how a sense of responsibility could be instilled into the populace and what criteria should be used to judge elected leaders? Meanwhile the minions of the former regime retain positions of power and influence. It is to be hoped that it will not be a case of "plus ca change plus c'est la meme chose".

Czechoslovakia has had a rapidly increasing population fostered by a Government which encouraged large families by offering larger allowances for the 3rd and 4th child. This has now stopped. The increasing population has been housed in apartment blocks 8-10 storeys high adjoining established communities. Such high density housing favours the provision of services, the development of an efficient, low cost public transport system, and leaves the countryside within easy reach of the population, but it is destructive of family life with a divorce rate of 80% being cited for the new city adjoining Bratislava.

Prewar eastern Czechoslovakia (the former Slovakia) was predominantly an agricultural society but since then there have been concerted efforts to industrialise its economy with an emphasis on chemical industries. It was surprising to come across substantial industrial works on the outskirts of small village communities in a rural agricultural setting.

Czechoslovakia has had virtually no inflation and hence prices and incomes have remained low. To obtain hard currency to fund purchases from the west the exchange rate strongly favours foreign visitors (20 Crowns to the A$). As a result there has been a flood of bargain hunters from Western Europe. All the hotels in Prague were fully booked with visitors being offered private accommodation in remote suburbs. This had disadvantages for anyone not speaking Czech. Little English was spoken even by hotel staff.

Eastern block socialism has failed economically but it remains to be seen whether western capitalism, offering a democratically elected government and a plethora of consumer goods, but plagued with inflation and unemployment can satisfy in the long run.

Doug KETTLE
University of Queensland, Brisbane

RESEARCH REQUEST

The Forest Ecology Section is currently undertaking a new research program to investigate the impact of repeated prescribed burning on terrestrial invertebrate communities in coastal Blackbutt forest in NSW. The study site has a well documented firing regime of 3-yearly prescribed burns, with paired control plots (unburnt for 20 years). Invertebrate communities are being sampled in early February 1991 (using pitfall traps) to firstly assess the impact of forest management practices on these invertebrate communities, and secondly, to identify (if possible) species or assemblages that may prove useful indicators of habitat condition.

The Commission is seeking the collaboration of other researchers and naturalists who may be interested in working with specific faunal groups from the trapped material. Please contact Alan York on (02) 872 0164 or write to Dr A. York, Forest Ecology Section, NSW Forestry Commission, PO Box 100, Beecroft, NSW 2119.

IUCN GENERAL ASSEMBLY, Perth: Invertebrates

The IUCN General Assembly gathered together some 1200 delegates and observers for a week of meetings in Perth in late November - early December 1990. Invertebrate interests were only sparsely represented, although a number of speakers in various workshops alluded to the problems of conserving 'biodiversity' and insects were mentioned in at least two of the major workshop sessions. A major resolution on the 'Conservation of Insects and other Invertebrates', designed by Mark Collins, was adopted by the General Assembly. Mark and Tim New were delegates at the Assembly for the Royal Entomological Society of London and the Societas Europaea Lepidopterologica.

The Assembly was preceded by a meeting of the Species Survial Commission. Attention was drawn to the plight of many marine invertebrates, and the Trade Group expressed concern at the extent of commerce in pearl mussels, used for seeding 'artifical' pearls. Tim New reported on the work of the Lepidoptera Specialist Group, and Prof. Seigo Higashi outlined the work of the former 'Ant Specialist Group' which is currently being reformed to cover the wider ambit of 'Social Insects'. Two new groups, on Orthopteroids and Water Beetles were foreshadowed and David Hughes (Glasgow) and Peter Bennett (London) were enthusiastically

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seeking support for the new 'Invertebrate Section" of the Captive Breeding Specialist Group. Ebbe Nielsen participated in a session on Australian problems, and gave an overview of some invertebrate conservation issues in this country. The general Assembly was also attended by Keith Brown (Brazil), well known for his work on butterfly biology and forest conservation, and Jonathan Majer.

The IUCN Council approved a recommendation from the SSC that an Invertebrate Conservation Task Force be set up to assess the information available on invertebrate conservation, and to recommend priorities in the field.

T.R. NEW
LaTrobe University.

'ENTOMOLOGY — SCIENCE FOR SURVIVAL'
Promotional Publication from CSIRO

The CSIRO Division of Entomology has released its newest promotional publication 'Entomology - Science for Survival'. The booklet shows the wide scope and goals of entomological research, and the benefits flowing from that work to industry and the community.

Written in a light journalistic style, the booklet is primarily written for politicians and potential industry targets, to give them a feel for the topic. Immense interest has already been generated, even at such an early stage in its circulation. A number of departments and schools have expressed interest in using the publication as resource material for students, and this is now being followed up.

Copies can be obtained directly from CSIRO Division of Entomology, GPO Box 1700, Canberra 2601.

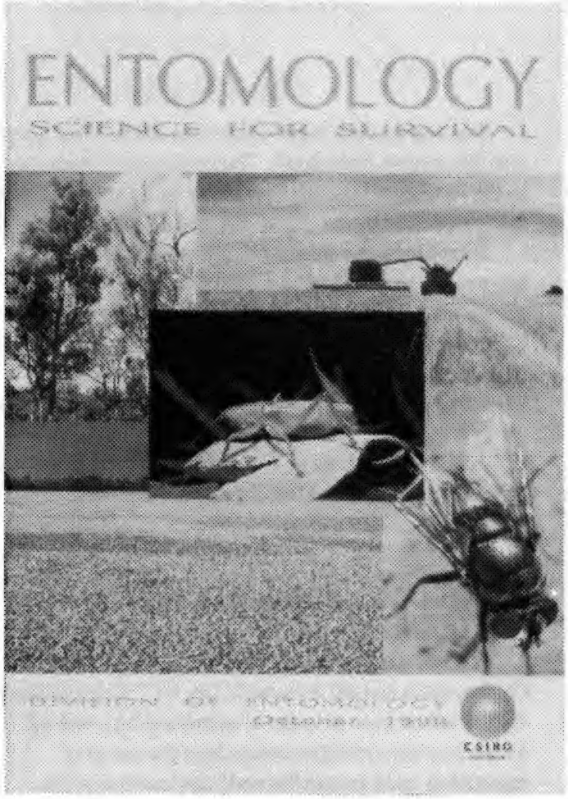
This is the first of a number of new publications from the Division. Others currently in production are:

- an updated 'Entomological Research and Development: a High Yielding, Low-Risk Investment' booklet;

- a new Entomology newsletter for external audiences, featuring stories on current research and trends in research;
- a revamped Research Report; and
- profiles of all Sections, Programs, major projects and major areas of research (e.g. sustainable agriculture) in the Division of Entomology.

If you want to receive copies of any of these, you should let the CSIRO Division of Entomology know as soon as possible.

The increased activity at the Division of Entomology is aimed at raising the awareness of matters entomological, and will be accompanied by a concerted media campaign aimed at all levels of the community.



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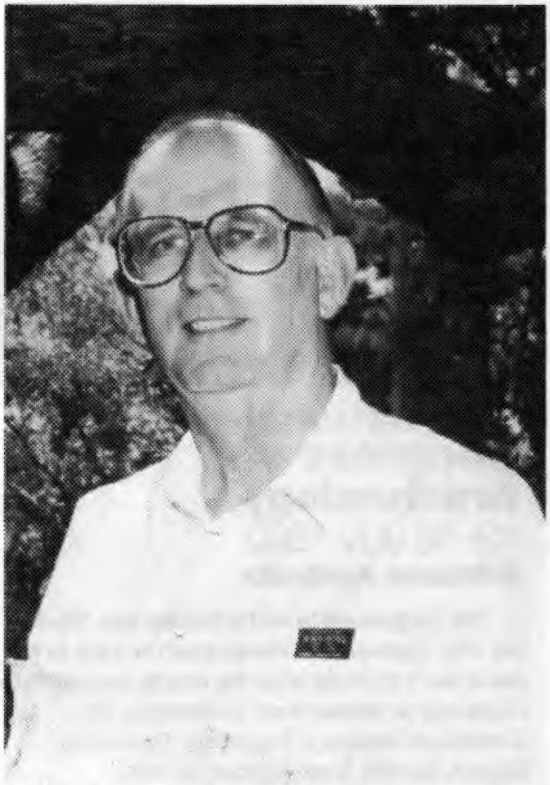


The Entomological Society of Victoria makes an annual award, in memory of the late J.C. ("Zoo") Le Soüef, for contributions to entomology by an amateur worker. The Society is pleased to announce that the award for 1990 has been made to Brisbane pharmacist, Deniss M. Reeves (pictured above). The award was made in recognition of his contributions to knowledge of the Odonata and Lepidoptera. Special mention was made in his commendation of the long and active role he has played in promoting insect studies within the Queensland Naturalists' Club. Congratulations on a well-deserved recognition, Deniss.

Coming Events

12TH INTERNATIONAL CONGRESS OF ARACHNOLOGY

XII

International Congress of Arachnology

12–18 July 1992

Brisbane Australia

This Congress will be held in Brisbane from 12th-18th July 1992. Expressions of interest should be made on the form in the First Circular which has recently been distributed. Copies may be obtained from: The Secretary, XII International Congress of Arachnology, Queensland Museum, Box 300, South Brisbane, Qld 4101.

1991 IMPORTED FIRE ANT CONFERENCE

This meeting will be held at Stone Mountain, Georgia, USA, on March 19-20, 1991. Information is available from: Coastal Plain Station, Tiffon, Georgia, USA 31793.

5TH AUSTRALIAN APPLIED ENTOMOLOGICAL RESEARCH CONFERENCE

The 5th Australian Applied Entomological Research Conference

The theme of this major conference will be "Pest Control and Sustainable Agriculture". The conference is approved by the Australian Standing Committee on Agriculture, and is being organised by the CSIRO Division of Entomology.

Sessions for the conference are expected to be: Integrated Pest Management, Pest Damage Assessment, Inundative and Inoculative Biological Control, Chemical Control, Cultural Control, Host-plant Resistance, Pheromones, Biotechnology and Molecular Biology, Modelling and Forecasting Pest Populations and Pollination Biology.

Further details from Dr Wendy Milne, CSIRO Division of Entomology, GPO Box 1700, Canberra, ACT 2601, Australia.

INDIVIDUALS, POPULATIONS AND PATTERNS

The first announcement has been made for this Conference to be held in Norwich, UK, on 7-10 September 1992. It will address all areas of animal ecology, and will emphasise how individual studies from the variety of approaches used around the world can lead towards a general understanding of ecological processes. Details available from: Dr S.R. Leather, Northern Research Station, Roslin, Midlothian, UK EH25 9SY.

ANZAAS CONGRESS 1991 — Adelaide

The theme of this years's ANZAAS meeting is "Reproduction and Renewal". Sessions within the Biological Sciences field include: Reproduction in plants and animals; Renewal of the degraded environment; Population control and toxins; Reproduction in an arid environment; Counting the cost- genetic engineering. The meeting takes place at the University of Adelaide on October 1-3 and enrolment information is obtainable from: ANZAAS CONGRESS 1991, c/- Professor David Boyd, University of Adelaide, GPO Box 498, Adelaide. S.A. 5001.

NATIONAL CONFERENCE ON SCIENCE AND GOVERNMENT

This major science policy conference will be held in Canberra on 13-14 March this year at the National Science and Technology Centre. Enrolment forms are available from: Ms Jenny Kelly, Executive Director, RAIPA, P.O.Box 329, Belconnen. ACT. 2616. Enrolment fee for non-RAIPA members is $275.

8TH INTERNATIONAL SYMPOSIUM ON BIOLOGICAL CONTROL OF WEEDS

To be held at Lincoln University, Christchurch, New Zealand, during the period 2-7 February, 1992. Information is obtainable from Ms P. Syrett, DSIR Plant protection, Private Bag, Christchurch, N.Z.

22ND AGM AND CONFERENCE OF THE AUSTRALIAN ENTOMOLOGICAL SOCIETY

Our next meeting will be held in Melbourne 14-19 July, 1991.

19TH INTERNATIONAL CONGRESS OF ENTOMOLOGY

The next International Congress will be held in Beijing, China, during the period June 28 - July 4, 1992 and is sponsored by the Entomological Society of China. The first announcement brochure has now been circulated and the second announcement brochure will be sent in March 1991 to those who have lodged their names with the Secretariat. To obtain the first announcement please write to: Prof. Z.I.Zhang, Secretary-General XIX International Congress of Entomology, 19 Zhongguancun Lu, Beijing 100080, CHINA. Tel: (861)2563011. Fax: (861) 2565689. Telex:222337 ICCST CN.

2ND INTERNATIONAL WORKSHOP ON LOWER LEPIDOPTERA

The 2nd International Workshop on Lower Lepidoptera will be held 22-25 March 1991 in Canberra, Australia. The program will include a series of review papers and short research reports. Contributions will include taxonomy, phylogeny and classification, biogeography, morphology and anatomy, ultrastructure, molecular taxonomy, general biology, palaeontology and systematic methodology.

The meeting will take place at the CSIRO Division of Entomology which also houses the Australian National Insect Collection.

An account of the first meeting in this series is given in *Antenna* 14(2): 84-85 (1990) by N.P. Kristensen.

The registration fee will be approx. A$100 and reasonably priced accommodation will be provided. Anyone wishing to receive further information and to offer contributions to this meeting, should write to: Ebbe S. Nielsen, CSIRO Entomology, GPO Box 1700, Canberra ACT 2601, Australia; telephone (06) 245 4258; fax (06) 246 4264.

COLEOPTERA LARVAE WORKSHOP

This will be held at the University of Hawaii, Honolulu, during the period June 2-8, 1991. Instructors for the week-long workshop will include Daniel K. Young (Wisconsin University), John Lawrence (CSIRO Canberra), Alfred F.Newton (Field Museum, Chicago) and Al Samuelson (Bishop Museum , Honolulu). The course fee is expected to be about $350. Registration forms and further information are available from: Tina Kuklenski, Dept of Entomology, Bishop Museum, PO Box 1900-A, Honolulu, Hawaii 96817-0916. Number limitations will apply.

EXOTIC ANTS: BIOLOGY AND IMPACT OF INTRODUCED SPECIES

This 3-day International Conference , followed by 2-3 days excursions, will be held in October, 1991, at the Charles Darwin Research Station in the Galapagos Islands, Ecuador. Topics to be dealt with include (i) biology of introduced ants (ii) reproduction, colony founding and dispersion (iii) field biology and population ecology, and (iv) impact and control of introduced ant species in fragile ecosystems. For further information contact: Dr D.F. Williams, USDA-ARS Medical and Veterinary Entomology Research Lab, P.O.Box 14565, Gainesville, Florida. 32604.

17TH PACIFIC SCIENCE CONGRESS

XVII PACIFIC SCIENCE CONGRESS

Towards the Pacific Century: The Challenge of Change

Will be held in Honolulu, Hawaii on May 27 - June 2 1991. Major symposia include: Global Environmental Change - Pacific Aspects; Population, Health and Social Change; Science and Culture; Biological Diversity; Emerging Technologies and Development; Frontiers of Physical Science: New Technological Advances and Pacific Science.

OVERSEAS REQUESTS

Enquiries have been received from two overseas beetle enthusiasts for correspondents who may be interested in exchanges. Jorgen Nielsen is interested in Cetoniinae, Tenebrionidae and Lucanidae, while Denis Bouchard desires Scarabaeidae. Their addresses are as follows:

Jorgen NIELSEN
c/- Lindell
Fyrspannsg. 63
162 39 Vallingby
SWEDEN

Denis BOUCHARD
46 Bd Mozart
78280 Guyancourt
FRANCE

A letter has also been received from USSR on behalf of 80 Moscow amateur entomologists who are interested in exchanging correspondence, specimens and literature. Those interested may make contact by writing to:

General Alexandr PETROVICH
Ferganskij Projezd
Dom 14, Kornys 2, Kv. 82,
Moskva 109507
USSR.

11TH INTERNATIONAL SYMPOSIUM ON CHIRONOMIDAE

This meeting will take place at the University of Amsterdam, the Netherlands, on 12-14 August, 1991. Contributions are expected to cover the whole field of research on the midge family Chironomidae including ecology, environmental changes, pollution, water quality, ecotoxicity, physiology, biochemistry, taxonomy and systematics. The Proceedings will be published. To receive the comprehensive second circular write to the following address:

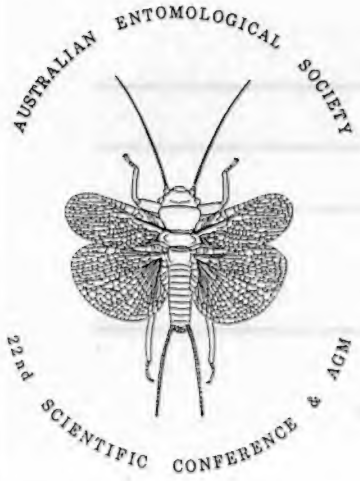
11th International Symposium on Chironomidae
Conference Office
University of Amsterdam
Spui 21
1012 WX Amsterdam
The Netherlands

AUSTRALIAN ENTOMOLOGICAL SOCIETY

22nd AGM and Scientific Conference

Melbourne

14–19 July, 1991



Scientific Sessions

The Impacts of Exotic Insects in Australia
Invited speakers will overview the topics of biological control, agricultural insect pests, and the effect of exotic insects on native flora and insects in terrestrial and freshwater environments. Papers are invited on these or other topics related to exotic insects in Australia.

Insects in Vulnerable Environments in S.E.Australia — With Particular Reference to Alpine and Aquatic Faunas
Invited speakers will address the nature and distribution of these faunas, their vulnerability to environmental changes and their conservation. Contributed papers are invited on alpine or aquatic faunas, or insects in other vulnerable environments.

Genetic Engineering and Biotechnology
Invited speakers will review the theory and application of genetic engineering and biotechnology in entomology. Contributed papers are invited.

Taxonomy Workshops
Workshops will be held to discuss taxonomic methodology and to update taxonomic knowledge of specific groups if there is sufficient interest. Delegates who wish to participate are invited to contact the conference organisers.

Contributed Sessions
Papers will also be accepted on all aspects of Australian Entomology not directly related to the major themes.

Social Events

Welcoming Dinner, Cocktail Party, Annual Dinner, Excursion to Healesville Sanctuary.

Contact: Janet Horne (convenor), Paul Horne, Andrew Henderson, Jim Woodward (biotechnology), Mali Malipatil (taxonomy) at the Plant Research Institute, Swan St, Burnley, 3121, Phone (03) 810 1511, for further information.

Biological Illustration Competition 1991

The Society invites entries to this competition in the form of taxonomic illustrations of insects. Anyone other than a person employed as a biological illustrator or entomologist may enter up to three (3) examples of their original work. Published illustrations will not be accepted.

Entries must be either a black and white or coloured whole body views of an insect (preferably identified) using any medium or technique, but suitable for reproduction after reduction by 50 per cent. The mounted illustrations should not exceed 21 x 30 cm (approx. A4). The winning black and white entries will be displayed at the Society's 22nd AGM and Conference in July 1991.

Entries (carefully packaged if posted) must be in the hands of the Secretary by the end of April 1991. Entrants will be advised of the outcome of the competition by mid-June and original artwork will be returned to the entrants by the end of July.

A condition of entry is that the Society shall have the right to display selected works in public as outlined above and to reproduce the illustrations with appropriate acknowledgement on items such as greeting cards which it sells.

Prizes for both black/white and colour:
1st prize $300
2nd prize $100

NAME _____

ADDRESS _____

_____

scientific name of insect (if known)

_____

Send this form with you entries to:
Dr Jonathan Majer
School of Biology
Curtin University of Technology
PO Box U1987
PERTH
WA 6001
FAX (09) 351 2495

Australian Entomological Society

Phil Carne Student Prize 1991

* This award (formally known as the Student Award) is open to students who have not yet gained their Ph.D. by 14 July, 1991.

* Entrants need not be members of the Society.

* Submissions should be in the form of a scientific paper of 5000 words or less, on entomological research.

* Entries will be judged by a panel of senior entomologists appointed by the President of the Society.

* The winner will receive $250 cash and will be invited to present the winning paper at the AES Scientific Conference held in Melbourne from 14-19 July, 1991. The Society will provide free conference registration, accommodation in Melbourne and a return air fare from the winner's home State.

* Please indicate your intention to submit an entry by completing the form overleaf and returning it to the Secretary by 1 April, 1991.

* Three copies of the paper, one and a half or double spaced, should be in the hands of the Secretary at the following address by the end of May, 1991.

Dr Jonathan Majer
School of Biology
Curtin University of Technology
GPO Box U1987
PERTH
WA 6001
FAX (09) 351 2495

Australian Entomological Society

Phil Carne Student Prize 1991

This is to advise that I intend to submit a paper on original entomological research for the Society's Student Award Competition in 1991.

My name is: _____

My postal address is: _____

_____

My paper will deal with (tentative title acceptable):

_____

_____

I am (or was) a student at (name of institution):

_____

My Supervisor's name is (or was):

_____

My current professional qualifications are:

_____

I will forward 3 copies of my entry to reach you by 31 May, 1991 and acknowledge that no paper can be accepted for judging which is not received by that date.

Signed: _____

Date: _____

Return completed form to:

Dr Jonathan Majer
School of Biology
Curtin University of Technology
GPO Box U1987
PERTH
WA 6001
FAX (09) 351 2495

Australian Entomological Society
Research Grants

Call for Applicants

The Executive takes pleasure in calling for applications for the Australian Entomological Society Research Grants to be awarded in 1991.

The scheme is intended to encourage the advancement and dissemination of entomological knowledge, particularly in relation to the Australian fauna. Grants may be given for items such as travel, equipment or technical support.

The grants are primarily for small, short-term projects and will be available only to members of the Society of at least 12 months standing. Groups will be eligible provided that the primary researcher is a member. Total funds available will be in the order of $4000.

A report to the Executive in a form suitable for publication in ***Myrmecia*** will be required by the end of 1992.

The application should clearly state:

* the aim of the project
* the expected duration of the project
* a detailed budget, and
* your contact address and telephone number

You may also supply the names of one or two referees if you wish.

The President will appoint a selection panel to allocate and administer the grants. Applications may be for any amount up to $4000, but remember that small, short-term projects which enable a diverse range of work to be funded will be favoured. Successful applicants for 1991 will be advised in June.

Five copies of your application should reach the Secretary at the following address no later than 30 April, 1991

Dr Jonathan Majer
School of Biology
Curtin University of Technology
PO Box U1987
PERTH
WA 6001
FAX (09) 351 2495

CORONATION HILL REPORT

The long awaited draft report of the Resource Assessment Commission inquiry into the Kakadu Conservation Zone was released in Darwin in February. The Conservation Zone lies in the heart of Stage III of Kakadu National Park, but is not legally part of the park. The inquiry focussed almost entirely on the proposed Coronation Hill gold and platinum/palladium mine, as this is the only proven resource in the Zone. However the ramifications of the inquiry extend way beyond Coronation Hill or even Kakadu - both the mining industry and the conservation movement see its decision as setting a precedent for mining in general in national parks.

The terms of reference of the inquiry were to provide the Government with information and a series of resource-use options, rather than to recommend whether or not mining should proceed. The draft report therefore contained no firm recommendations. However there were three findings that I consider to be particularly significant:

(1) Although the gross value of Coronation Hill's mineral deposits is several hundred million dollars, the nett benefit of the project is only 82 million dollars. Thus, at best, the project would have only marginal economic value to Australia.

(2) Despite the extreme biological significance of the region, the project could proceed with minimal environmental impact. The one caveat concerned the effect of the project on the dry season water flow of the South Alligator River.

(3) The unequivocal view of the lower Jawoyn aborigines, who are the traditional owners of the region, is that the mine should not proceed. This is probably the most crucial of all the inquiry's findings, as, according to current law, mining cannot proceed without approval from the traditional owners.

There has been much debate, particularly here in Canberra- bashing Darwin, about the merits of the inquiry. (Not another bloody inquiry!) But in my view it has been thoroughly worthwhile. The Commission has done a fantastic job of assembling all the relevant facts (readers will be pleased to note that our Society's submission was frequently cited), and its cost of $1.3 million compares with almost double that spent by the proponents of the project on its Environmental Impact Statement. The draft report is the most readable of its kind I have ever read. The Commission is due to release its final report in April, and then it is up to the Government to make its decision. This is the way all major resource-use conflicts ought to go in the future!

Alan N. ANDERSEN
NT Representative
Conservation Committee

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1986 Dr R.W.Sutherst
1988 Dr T.R.New
1990 Dr R.A.I.Drew

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Dow Chemical (Aust) Ltd

ICI Australia Ltd

Shell Chemical (Aust) Pty Ltd

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